CHAPTER 9: ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN (ESMP) AND MONITORING PROGRAMS

9.1 INTRODUCTION

This chapter contains the Environmental and Social Management Plan (ESMP) for potential environmental and social impacts identified due to the proposed BMTLP. It covers all phases of the transmission line project, right from pre-construction, construction to the operation and maintenance phases of the BMTLP. It will guide the Project Proponent and Contractor how to implement the recommended mitigation measures prior to site occupancy and during construction and operation, in compliance with applicable environmental standards.

Impact assessment carried out in **Chapter 8** identified the potential impacts and recommended the avoidance, minimisation, mitigation and compensation measures necessary to reduce impacts to non-significant residual impacts.

With added details on actions plans, responsibilities, monitoring indicators and their timing and frequencies, these measures are compiled into a series of ESMPs for implementation by SEB and the Contractors. The sub-plans contained in this ESMP and the parties responsible are as follows:

Implemented throughout Preconstruction, Construction, and Operation Phases	**Pre-Construction/ Construction**	**Operation / Maintenance**
Responsibility: SEB	**Responsibility: Contractor**	**Responsibility: SEB**
• Stakeholder Engagement Plan • Land Acquisition and Livelihood Restoration Plan • Cultural Heritage Management Plan including Chance Find • Public Health Management Plan • Occupational Safety and Health Management Plan	• Erosion and Sediment Control Plan (ESCP) • Waste Management Plan • Biodiversity Management Plan • Public Health Management Plan • Occupational Safety and Health • Labour and Local Content Management Plan	• Stakeholder Engagement Plan • Land Acquisition and Livelihood Restoration Plan • Biodiversity Management Plan • Cultural Heritage Management Plan including Chance Find • Public Health Management Plan

Implemented throughout Preconstruction, Construction, and Operation Phases	**Pre-Construction/ Construction**	**Operation / Maintenance**
Responsibility: SEB	**Responsibility: Contractor**	**Responsibility: SEB**
• Labour and Local Content Management Plan • Waste Management Plan • Supply Chain Management	• Emergency Response Plan (ERP) • Site Rehabilitation Plan	• Occupational Safety and Health / Labour Management Plan • Labour and Local Content Management Plan • Waste Management Plan • Supply Chain Management • Emergency Response Plan (ERP)

9.2 OBJECTIVES

This ESMP is developed to complete and address the issues identified in this ESIA, and provide measures and actions to mitigate/ manage potential adverse impacts, or to enhance positive or beneficial impacts based on the following mitigation hierarchy:

- Avoidance
- Minimization
- Mitigation
- Compensation

The plan outlines mitigation measures that will be undertaken to ensure compliance with environmental laws and regulations and to eliminate adverse impacts. The objectives of this ESMP, thus, are:

- To ensure compliance with environmental laws and regulations, HSAP requirements.
- To identify a range of mitigation measures which could reduce and mitigate the potential impacts to minimal or insignificant levels.
- To identify measures that could optimize beneficial impacts.
- To ensure that mitigation measures are implemented.

- To establish a method of monitoring and auditing environmental management practices during all phases of the project in compliance with NREB requirement.
- To monitor the effectiveness of mitigation measures.
- To take any necessary action or response when unforeseen impacts occur.
- To ensure continual improvement in environmental performance.
- To establish systems and procedures for this purpose.

This ESMP has been developed in line with applicable legal and policy requirements as indicated in Chapter 1. These include NREB's EIA requirements and the requirements of the IHA's Hydropower Sustainability Guidelines on Good International Industry Practice (HGIIP) and its two complementary assessment tools, namely HSAP and Hydropower Sustainability Environmental, Social, Governance Gap Analysis Tool (HESG).

9.3 SEB'S ENVIRONMENTAL POLICY

It is the policy of SEB to carry out its business activities in a manner consistent with sound HSSE (Health, Safety, Security and the Environment) management practices and to comply with applicable HSSE laws and regulations. This will be achieved by management, employees and contractors working together adopting the HSSE management systems and standards. Performance will be monitored, reviewed and audited to achieve best practice.

Safety is SEB's top priority with its slogan **'Everybody Goes Home Safely'**. In 2017, SEB introduced 11 Life-Saving Rules to all employees and contractors (see **Figure 9.3.1** below). These 11 simple rules are designed to help SEB achieve its goals of zero Lost Time Injury and Zero Workplace Fatalities.

Source: https://www.sarawakenergy.com/about-us/safety-environment

Figure 9.3.1: Sarawak Energy Life-Saving Rules

SEB's Occupational Safety & Health Policy and Environmental Policy are shown below (**Figure 9.3.2**).

OCCUPATIONAL SAFETY AND HEALTH POLICY

Sarawak Energy Berhad is committed to generate and supply energy in a reliable and efficient manner. In carrying out our business activities and operations and in ensuring customer satisfaction, we promote work safety for employees and the public.

In this respect, we are committed to:

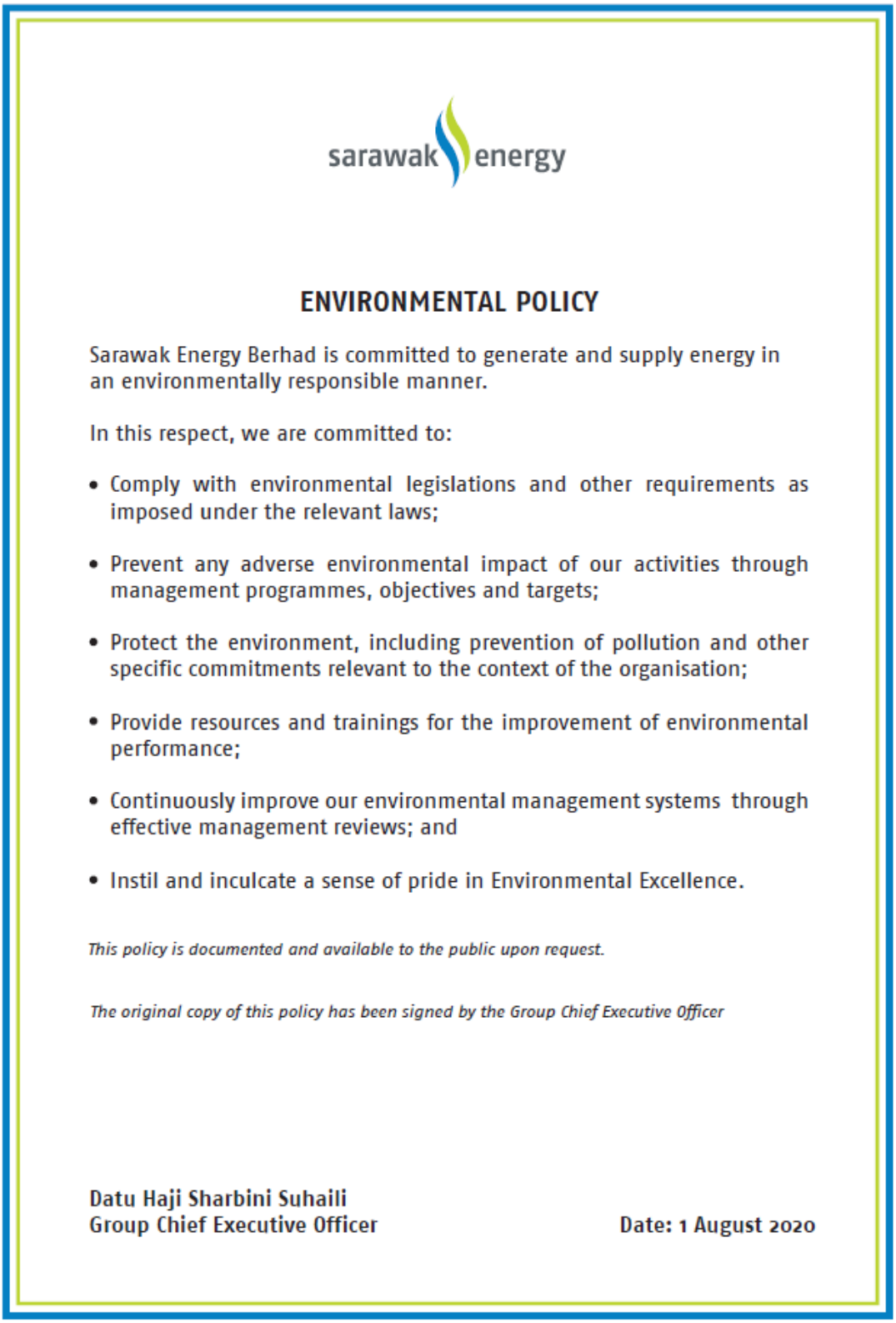
- Comply with safety and health legislations and other requirements as imposed under the relevant laws;
- Prevent injury and ill-health or other adverse impact of our activities through management programmes, objectives and targets, hierarchy of control and risk assessment;
- Provide information, instruction, training, supervision and resources for the improvement of safety and health performance;
- Continuously improve our occupational safety and health management systems through effective management reviews and enhancement; and
- Inculcate and sustain a generative safety culture through consultation and participation of interested parties.

This policy is documented and available to the public upon request.

The original copy of this policy has been signed by the Group Chief Executive Officer

Datu Haji Sharbini Suhaili
Group Chief Executive Officer

Date: 1 August 2020



sarawak energy

ENVIRONMENTAL POLICY

Sarawak Energy Berhad is committed to generate and supply energy in an environmentally responsible manner.

In this respect, we are committed to:

- Comply with environmental legislations and other requirements as imposed under the relevant laws;
- Prevent any adverse environmental impact of our activities through management programmes, objectives and targets;
- Protect the environment, including prevention of pollution and other specific commitments relevant to the context of the organisation;
- Provide resources and trainings for the improvement of environmental performance;
- Continuously improve our environmental management systems through effective management reviews; and
- Instil and inculcate a sense of pride in Environmental Excellence.

This policy is documented and available to the public upon request.

The original copy of this policy has been signed by the Group Chief Executive Officer

Datu Haji Sharbini Suhaili
Group Chief Executive Officer

Date: 1 August 2020

Figure 9.3.2: SEB's Occupational Safety & Health Policy and Environmental Policy

9.4 ESMP ROLES AND RESPONSIBILITIES

The key roles and responsibilities in implementing the ESMP are divided between SEB and its Contractors / Sub-contractors.

Parties	Responsibilities
SEB	Responsible for overseeing compliance with environmental policy and monitoring compliance of the project, and ensure compliance with the obligations set out in the ESMP during the **pre-construction, construction and operation** phases. **Pre-Construction / Construction Phase:** ● Project Delivery (PD) Department and its Project Execution Team (PET) will be responsible for implementation of the proposed mitigation measures and this ESMP. PET will be responsible for ensuring, on a day-to-day basis, that the mitigation measures and monitoring activities identified in this ESIA and ESMP are implemented along with reference to its Project Execution Plan (PEP)[1]. PET overall organization chart is shown in **Figure 9.4.1** while the indicative organization chart during construction and operation phases is shown in **Figure 9.4.2**. ● Incorporating E&S requirements into the pre-qualification and tendering of construction contracts, and ensuring that only contractors that are able and willing to implement this ESMP are selected. ● Monitoring the Contractor's construction activities to ensure compliance with the environmental specifications and provisions of the construction contract. ● Providing environmental training to contractors regarding environmental issues involved in construction. **Operation and Maintenance Phase:** ● The **maintenance and safe operation** of the transmission line shall be the responsibility of SEB and the relevant government agencies.

[1] A Project Execution Plan (PEP) has been prepared by the PET as project management tool to be utilized and updated where required throughout the execution phase of BMTLP. The objective of the PEP is to provide the Proponent, the Project Management Team and other Stakeholders with an understanding of the structured approach and processes that will be utilized to and including project execution. This will be the main governing document for the project execution. The PEP will ensure that a consistent approach is adopted by all parties managing the Project and is intended to be a mandatory control document for all aspects of the BMTLP.

Parties	Responsibilities
Contractor	**Construction Phase:** ● Responsible for implementing site specific ESMP through their own HSE management system and management plans to be approved by SEB. ● Each Contractor will be required to have a full time HSSE Manager and Environmental Officer (EO) on site. They have the responsibility to ensure that environment, health and safety regulatory requirements are met and that ESMP requirements are properly implemented. ● The Contractor shall comply with all environmental Laws that apply during the construction phase and all other laws, including legal requirements issued by any Government Authority.
Sub-contractors	Accountable for following and complying with the ESMP requirements set out by the Contractor and SEB during **construction phase**.

9.4.1 SEB Management Structure

SEB internal requirements for HSSE Management shall be in accordance to the following documents in PMO Library:

1. PMO-HSE-POL-3000 [Occupational Safety and Health Policy]
2. PMO-HSE-PCS-3100 [HSE Management System]
3. PMO-ENV-PCS-3200 [Environmental Management Process]
4. PMO-OSH-PCS-3300 [OSH Management Process]

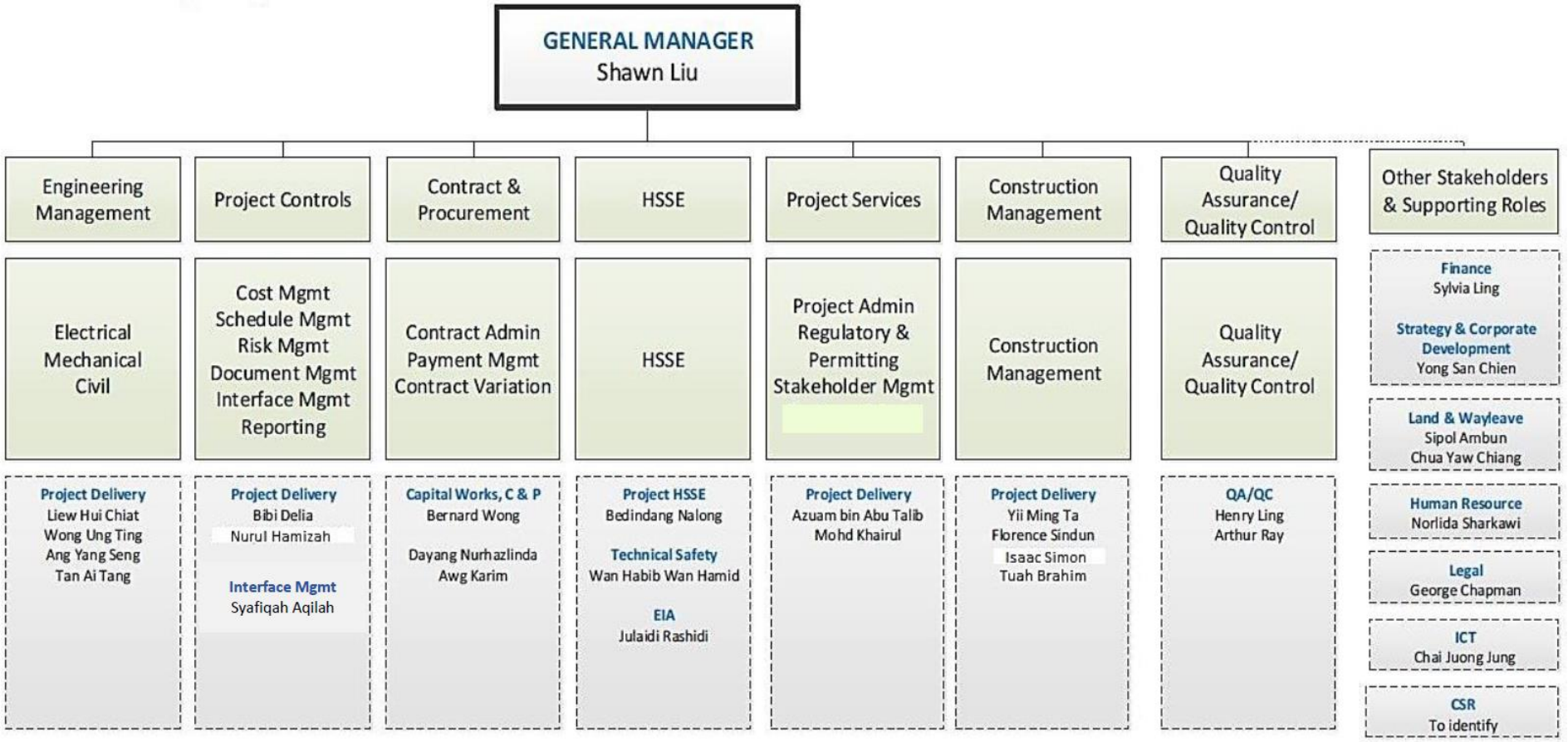
SEB is committed in managing project HSSE guided by Hydropower Sustainability Guideline by IHA (International Hydropower Association).

The most important from an environmental perspective are the PET Construction Management Team that consists of personnel from Transmission Line Projects - Project Delivery Department. Personnel from the Construction Management Team shall report to the respective Project Manager and the General Manager throughout the duration of their participation in the BMTLP. The roles and responsibilities of key positions are summarised below:

	Key Positions	Roles and Responsibilities
1.	General Manager	The General Manager is accountable and responsible for managing and delivering the project in accordance with the project mandate and the framework defined. He / she may delegate his responsibility of the implementation and the operation of ESMP to the Project Manager and his / her subordinate personnel. The responsibilities of the General Manager, are among others: ● Pivotal person for performance and delivery of the Project. ● Ensure overall Project Team possess a demonstrable and appropriate level of competency to execute their designated roles and responsibilities effectively. Any deficiency of knowledge and experience will be improved by creating training and development plan for personnel. ● Assure that ESMP is implemented throughout the construction phase and the commissioning and operational phase of the project. ● Assure that sufficient resources, human and material are allocated for all ESMP requirements. ● Drive and support the PET towards main directives, objectives and goals of the Project. Report to SEB management on status and key issues impacting the Project.
2.	Project Manager	The Project Manager is responsible to oversee the implementation of the ESMP. ● Focal person in performance and delivery of the Contract Package. ● Ensure overall Project Team possess a demonstrable and appropriate level of competency to execute their designated roles and responsibilities effectively. Any deficiency of knowledge and experience will be improved by creating training and development plan for personnel. ● Be aware of the findings and conclusions of the ESIA and the ESIA Approval Conditions issued by NREB, and ensure they are implemented. ● Ensure that the Contractor's personnel also possess a demonstrable and appropriate level of competency to execute their designated roles and responsibilities effectively. ● This will be done through verifying that the Contractor's personnel have the appropriate accreditation and certification.

	Key Positions	Roles and Responsibilities
		● Review and approve the Contractor Environmental Management Plan and identify any areas for improvement. ● Identify the environmental, health and safety competence of all contractors (and subcontractors) working on the project. ● Report to General Manager on status and key issues impacting the Project. ● Assimilate and consolidate all functional areas of project management
3.	Health, Safety, Security & Environmental (HSSE) Manager	● Pivotal personnel for matters impacting HSSE. ● Report to General Manager on status, key issues and risk impacting HSSE. ● Create and implement internal HSSE process and procedures. ● Monitor and control activities impacting HSSE requirements.
4.	HSSE Officer	HSSE Officer shall report to the HSSE Manager. He will be assigned to: ● Planning for implementation of the ESMP taking into account the ESIA report recommendations. ● Update Daily Site Book. ● Conduct daily inspections on pollution control measures and BMPs structure, projects erosion and sediment control (including perimeter drain, check dam, sedimentation ponds, slope protection and etc.). ● Direct environmental awareness material distribution. ● Perform audits of Contractor and sub-contractor HSSE protection activities. ● Co-ordinate environmental and safety incident investigations and report findings to Project Manager. ● Suggest changes to the Construction ESMP to account for changes in the Project / construction scope of work and also changes in regulatory or project policies. Ensure all workers are aware of any changes to the ESMP and revised procedures. ● Assess HSSE protection compliance and report findings to HSSE Manager. ● Carry out monitoring or ensure that the monitoring is carried out by competent personnel / organization.

	Key Positions	Roles and Responsibilities
		• Provides advice and assistance to the Project Manager to help ensure operations are conducted in a safe and environmentally sound manner. • Ensuring environmental reports are done according to ESIA requirement.



Source: Project Execution Plan (Doc. No.: RES-PLS190133-PEP), SEB 2020

Figure 9.4.1: Overall PET Project Organisation Chart

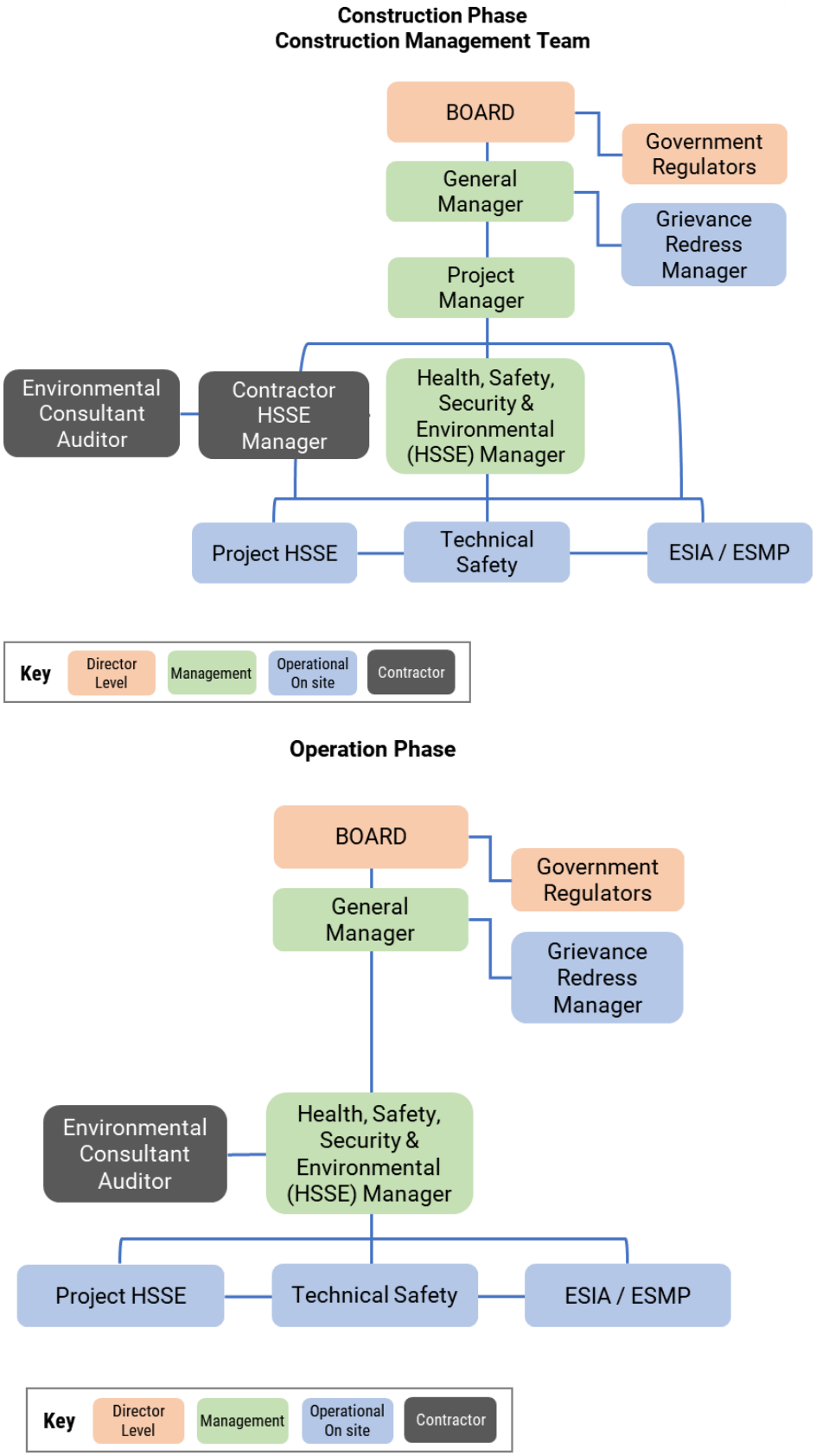


Figure 9.4.2: Indicative Organization Chart for Construction and Operation Stage Environmental and Social Management

9.4.2 Contractors Management Structure

The Contractor is responsible for the implementation and compliance with recommendations and conditions of the ESIA, ESMP as well as relevant rules and regulations in accordance with contractual technical and quality specifications during construction phase. The roles and responsibilities of key positions of the Contractor is summarised below:

	Key Positions	**Roles and Responsibilities**
1.	Contractor HSSE Manager	• Develop site- and/or activity-specific ESMP consistent with SEB's requirements, prior to the commencement of any works. • Be familiar with the recommendations and mitigation measures of the ESIA and this ESMP, ensure compliance and implement these measures at all times during construction phase. • Co-ordinate implementation of the environmental management programs to ensure compliance with the approved ESIA report and its approval conditions. • Be familiar with and enforce Project HSSE rules, regulations, and laws and document all actions taken to ensure compliance with those. • Ensure that only competent persons are assigned for work tasks. This includes ensuring the worker has the skills and knowledge to safely execute the work task. • Prioritize employment of qualified local residents. • Report any major incidents immediately to the SEB's HSSE Officer.
2.	Contractor EO	• Monitor activities on site on a daily basis. • Assign individual environmental inspector to each active work area to conduct routine end-of-day maintenance check and keeping records, for the ESCP BMPs implemented at the respective work area. • Take necessary precautions to safeguard the lives and property of any nearby communities. • Implement good housekeeping practices starting from construction activities and throughout the life of the project. • To keep records of incidents that occur at their respective construction site including but not limited to the following: ► Public involvement / complaints. ► Health and safety incidents.

	Key Positions	Roles and Responsibilities
		► Incidents involving hazardous materials stored on site. ► Non-compliance incidents. • Reporting to HSSE Manager on environmental and social matters and other construction issues.

9.4.3 Role and Capacity of Third Parties

The key third parties of concern to this ESIA and ESMP are as follows:

	Third Parties	Roles and Responsibilities
1.	NREB (Natural Resources and Environment Board, Sarawak)	The NREB is tasked with the responsibility of protecting and managing the environment and the conservation of the natural resources of the State based on the principles of sustainable development. Sections 11A (1) and 18 of the Ordinance empower the NREB to make rules and orders pertaining to the submission of reports having impacts on environment and natural resources. Consequently, the NREO 1994 was made and came into force on 1 September 1994. The Order requires that EIA reports on prescribed activities having impacts on the environment must be submitted to the NREB for approval prior to project implementation. It also has the authority to direct any Environmental Authority and any person to undertake environmental monitoring and auditing of any prescribed activities. The ESIA for the proposed BMTLP will be submitted to NREB. Following this NREB will distribute the report to other relevant Government agencies for review, before decision (approval or rejection) on the ESIA is made. Although public display and notification of the ESIA is not mandatory under NREB's EIA review procedures, SEB will undertake this step, in compliance with HSAP and international requirements. During construction phase, environmental personnel from NREB will carry out periodic visits to the project site to check on environmental compliance.
2.	LSD (Land and Survey Department)	LSD which is administering land matters, and enforcing the Sarawak Land Code on behalf of the Sarawak Government to ensure proper land use. It will play its role in determining land status of the lands affected by the proposed BMTLP and the rates of compensation for the loss of land and assets associated with this loss as well as administering the

	Third Parties	Roles and Responsibilities
		payment of compensation for the affected communities. The area that is to be used by the proposed BMTLP and its installations will have to be acquired. Section 46 (c) of the Land Code empowers the Government to make compulsory acquisition of the lands for the purpose of the proposed project. The line route, as proposed by the Proponent, shall "avoid titled lands including possible environmental and culturally significant areas". This complies with Part III, Section 15 of the Code under Protection of Native Customary Rights. Where native customary rights (NCR) are to be extinguished by the government, compensation will be paid to the affected natives. No State land which is encumbered by native customary rights may be alienated without payment of compensation. Proper acquisition of land shall be implemented for the use of the Project to avoid any issues on a later date. Legacy issues of Baleh HEP i.e., the unsettled alleged land claims within Baleh HEP water catchment; and potential claims on the adversely affected livelihoods (cause by deterioration of water quality as the result of Baleh HEP works) by the lower Baleh communities (from Nanga Merirai to Nanga Baleh) were identified as negatively influenced the support the proposed BMTLP. Land Issues raised by the communities of Nanga Sepanggil (Rh. Jamit), Nanga Entelawan (Rh. Jake and Rh. Samon), Nanga Serenggat (Rh. Sintau) and Nanga Entelangau (Rh. Jantai), is another legacy issue related to Baleh HEP that could potentially cause delay to the proposed BMTLP. Poor handling of these issues may increase the risk of the affected communities to take actions such access road blockage/ land access, preventing project workers and material movement in/out of the project site, and prevention of transmission line from being constructed in the affected lands.
3.	Department of Environment (DOE)	DOE is responsible to enforce the requirement for scheduled wastes and wastewater management in any project in Malaysia. This requirement falls under the First Schedule of the Environmental Quality (Scheduled Wastes) Regulations 2005. The Regulations govern the management and control of Scheduled Wastes, from their collection, storage, handling, transportation, and treatment to their disposal.

	Third Parties	Roles and Responsibilities
		Environmental Quality (Sewage) Regulations, 2009 outline the control of sewage and effluents generated from various human and industrial activities. It is pertinent to this project to regulate the wastewater and sewage discharges from all temporary residential facilities and offices with sanitary facilities. Management of scheduled wastes and sewage during and after construction forms an essential part of the project activities. These wastes need to be carefully disposed of for safety and health concerns, aesthetics and pollution prevention.
4.	District Offices of Kapit, Song and Bukit Mabong	These front-line government agencies will be responsible for assisting in the settlement of grievances and disputes brought up by members of the affected communities.
5.	Environmental Consultant	Throughout the construction and operation of the Project, both SEB and its appointed Contractors will have to engage environmental consultant to be responsible for: ● Execution of the post-ESIA monitoring requirements as per NREB requirements as stated in the ESIA Approval Conditions. ● Auditing compliance on the ESIA approval conditions. ● Reporting to SEB and NREB on environmental matters. SEB and its Contractors must engage qualified and NREB, Sarawak registered environmental consulting firms.
6.	Third-Party Environmental Auditor	The Third-Party Auditor will: ● Conduct independent environmental audits on during the construction phase in accordance with ESIA Approval Conditions and the ESMP. ● Submit audit reports to SEB and relevant authority, if required. ● Engage specialist sub-consultants registered with NREB, Sarawak when required.

9.5 DESIGN MEASURES INTEGRATION

SEB has consciously built into the design of the planned transmission line specific features that minimise complexity and help mitigate risks across the full life cycle of the transmission line project. One of the key factors that govern the design of the transmission line is the possible infringement of populated/ forest/ cultivated area and scarce land. This type of infringement is to be avoided where practically possible. The following measures have been embedded in the design to minimize environmental and social impacts during pre-construction, construction and operation phases:

Phases	Implementation
Pre-Construction	
• Avoidance of human settlements / longhouses	• No physical displacement or resettlement of residents or longhouse
• Avoidance of towns / bazaars	• No town along the route
• Avoidance of any public utility services, schools, community places, places of worships	• No public places affected
• Avoidance of titled land lots	• The final route (out of 3 route options) avoided titled land lots as much as possible. • Land acquisition to be completed prior to start of work on site.
• Avoidance of heritage site	• No heritage site along the transmission line
• Avoidance of cultural significant areas such as gravesites	• ROW deviated to avoid 4 gravesites
• Avoidance of terrain of more than 250 m in elevation	• The final route (out of 3 route options) avoided steep slopes as much as possible.
• Soil erosion control	• Contractor to prepare dedicated ESCP by a competent professional before the start of Construction work.
• Reduce number of major navigable river crossings	• Implemented
• Lattice tower type and design parameters	• Proven suitability to the conditions in Sarawak, low-cost operation, ease of transportation, ease of erection in hilly and remote areas with limited road access. • The lattice tower is suitable for on-site manual assembly and limited space availability for installation.

Phases	Implementation
• Access roads and jetties	• Opt for existing or abandoned logging tracks and jetties.
Construction	
• Avoidance of gravesites	• In case more gravesites are discovered as the line survey progresses, the ROW will be deviated by at least 50 m side ways
• Potential damage to GFS pipelines, weir, power supply, roads	• Immediate repair of affected infrastructures
• Establishment of onsite support facilities	• Appropriate siting away from any environmental sensitive areas. • Provision of adequate accommodation, with sanitary facilities by the Contractor to the workers is made obligatory.
• Tower sites	• Keep tower foot print to a maximum area of 40 m x 40 m • ESCP BMPs, check dams, temporary earth drains to be established
• Biomass disposal	• No open burning
• Occupational safety and health	• Provision of PPE
• Public safety	• Engagement with affected community • Traffic signs, danger signs, warning, etc.
• Sewage treatment	• Install approved septic tanks in accordance with the “Sarawak Urban Sewerage System Guidelines No. 1: The Design and Construction of Septic Tanks” issued by Sewerage Service Department Sarawak to enable raw sewage to be treated to Standard B prior to discharge
• Municipal waste disposal	• Waste must be disposed at Council operated dumpsites
• Contractor Facility, Storage Site and Worker Camps	• Ensure Contractor prepare Worker Accommodation Plan which should address minimum accommodation standards for the workers (no. persons per room, room size, ventilation etc., no. persons per toilet etc.), and set standards for both the main accommodation and temporary accommodation • Site office and onsite base camp at each construction site should be designed to plan to include important structures and provision such as:

Phases	Implementation
	1. Clean water supply sources (drinking and washing) and storage tanks or taps. 2. Sanitary facilities and washing areas (at least 30 m from watercourses). 3. Communal kitchens. 4. Waste handling and disposal facilities. 5. Power supply and genset house. 6. Proper site drainage. 7. First aid kits and vehicles for emergency cases.
Operation	
• **TL's resilience to plausible climate change**	• Design of the 500kV standard tower has taken into consideration the relative reliability factor of 4 in the return period of 200 years which equivalent to 30% extra load factor on top of the extreme weather condition ever recorded by MS1553 Malaysia Code of Practice within Sarawak region • Aligned with the recommendation as specified in ASCE Code of Practice. A standard practice adopted in most utilities as the guidelines for Electrical Transmission Line Structural Loading consideration
• 50 m ROW	• Sufficient space for safe operation and public risk
• Public safety	• Install spikes and barbed wires to prevent members of the public from climbing up transmission towers. • Inform nearby community, putting up clear danger and no entry signboards, etc. • Undertake annual ground surveillance of the ROW to ensure that people are not building new dwellings within the corridor

9.6 ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN (ESMP)

The ESMPs are divided into two sections, for the Project Proponent and Contractor.

The Proponent ESMPs are as follows:

1. Stakeholder Engagement Plan
2. Land Acquisition and Livelihood Restoration Plan
3. Cultural Heritage Management Plan
4. Public Health Management Plan
5. Occupational Safety and Health Management Plan
6. Labour and Local Content Management Plan
7. Waste Management Plan
8. Supply Chain Management Plan

The Contractor ESMPs are as follows:

1. Erosion and Sediment Control Plan (ESCP)
2. Waste Management Plan
3. Biodiversity Management Plan
4. Public Health Management Plan
5. Occupational Safety and Health Management Plan
6. Labour and Local Content Management Plan
7. Emergency Response Plan (ERP)
8. Site Rehabilitation Plan

9.7 PROJECT PROPONENT ESMPs

9.7.1 Stakeholder Engagement Plan

9.7.1.1 Purpose

SEB is responsible to implement this Stakeholder Engagement Plan with the assistance from relevant government agencies when required.

This stakeholder engagement plan is to provide project stakeholders, particularly the affected external stakeholders that include local peoples/communities, relevant government agencies, non-government organizations (NGOs), government and other interested parties with project information and to allow them to participate in the project decision-making process.

The stakeholder participation will encourage the consideration of the stakeholders' needs or roles as they relate to the proposed project; hence the stakeholders will help to maintain long-term project acceptability.

The plan outlines a framework for consultation and information disclosure methods for stakeholders to air project concerns, make suggestions, and meaningfully influence the process of the project development.

This plan is a continuation of stakeholder analysis and engagement activities carried out during the ESIA study (see **Chapter 4**); hence, the requirements of consultation and disclosure, descriptions of approaches and methods for stakeholder engagement/consultation shall be referred to and read with this plan.

The plan is forward-looking and intended to manage stakeholder engagement in the ESIA post-approval phase particularly during implementation (i.e., pre-construction, construction) and operation phases. It specifically focuses on:

- Undertaking organized, timely and meaningful consultations to obtain stakeholder favour or cooperation.
- Disseminating relevant project information to affected communities or other relevant stakeholders, and to document any concerns/issues from such stakeholders.
- Establishing wider range of stakeholder engagement activities in the post-approval phase.

- Provision of a grievance procedure to enable individuals and groups to make grievances and for grievances to be resolved in a transparent manner (specifically described in **Chapter 10**).

9.7.1.2 Scope and Update of Stakeholder Engagement Plan

Consultation will continue throughout the duration of the project. The plan will be continuously updated through workshops or meetings initiated by the Project Services Team (PST) of Project Execution Team (PET) in order to reflect changes and needs as the work progresses. This is to ensure the plan suits the points or phases of the project progress, especially with regards to relevant stakeholders, issues of interest, and approaches/ methodologies of engagement.

These workshops, dialogs or meetings shall be collectively attended by other PET members in order to better identify and agree on the best practice in managing communication with relevant stakeholders. Vulnerable groups including women headed households, elderly, and IPs will be paid attention. Representatives of women will also be considered in the consultations to make sure that these groups will have access to any information related to the project activities.

The initiatives to be taken by PST/PET are to be supported by various SEB Corporate Services such as Corporate Social Responsibility (CSR), Corporate Communications, Government Relations, Community Relations, Event Management and Protocol, etc.

9.7.1.3 Project Stakeholders

The existing list of project stakeholders (see **Table 4.4.1** in **Chapter 4**) have been analysed based on power/influence matrix (**Section 4.4.2, Figure 4.4.1** of **Chapter 4**) of their relevancy to the project's implementation and operation phases. Based on the analysis, the stakeholders are grouped as below:

a) High power, highly interested stakeholders (Manage Closely):

- SEB (all related departments)
- Sibu and Kapit Resident Offices
- Kanowit, Song, Kapit and Bukit Mabong District Offices
- Land and Survey Department
- Community leaders
- Directly affected communities

b) High power, less interested stakeholders (Keep Satisfied):

- Natural Resources and Environment Board (NREB), Sarawak
- Department of Environment (DOE), Sarawak
- Sarawak Rivers Board (SRB)
- Construction Industry and Development Board (CIDB)
- Department of Labour Sarawak
- Ministry of Finance (MOF)
- Electrical Inspectorate Unit
- Ministry of International Trade and Industry (MITI)
- Department of Occupational Safety and Health (DOSH)
- Immigration Department
- Royal Malaysian Customs Department (RMC)
- Sarawak State Attorney General's Chambers
- Majlis Adat Istiadat Sarawak
- Sarawak Museum

c) Low power, highly interested stakeholders (Keep Informed).

- State Planning Authority (SPA)
- Ministry of Utilities (MOU)
- Economic Planning Unit (EPU), Sarawak
- Regional Corridor Development Authority (RECODA)
- Upper Rajang Development Agency (URDA)
- Public Works Department of Sarawak (Jabatan Kerja Raya, JKR)
- National Institute of Occupational Safety and Health (NIOSH)
- Police
- Fire and Rescue Department
- State Security and Enforcement Unit (Unit Keselamatan dan Penguatkuasaan Negeri, UKPN)
- National Security Council (Majlis Keselamatan Negara, MKN Sarawak)
- Indigenous people associations (NGOs) - PKPB, PKNAK, SNDU, SADIA

- Media

d) Low power, less interested stakeholders (Monitor)

- Political groups
- Forest Department Sarawak (FDS)
- Sarawak State Health Department
- Indirectly affected communities
- Private businesses (logging/timber companies, oil palm plantations, suppliers)

9.7.1.4 Disclosure of Information and Communication Program

The disclosure of information and communication program proposed for the implementation and operation phases of the project is listed in **Table 9.7.2**.

The program is aimed at informing the stakeholders of project updates and/or activities in a manner that promotes open dialogue among all interested stakeholders, particularly the affected local communities.

The program allows them to have meaningful input in the decision-making process regarding the development of the project, particularly the proposed mitigation measures which will affect them. The program should also provide timely project updates to the relevant government agencies, or private businesses to enable them to provide valuable inputs to in project decisions.

Important project documents, particularly ESIA Report, Environmental Monitoring Report (EMR), and Land Acquisition and Livelihood Restoration Plan (LALRP) shall be disclosed to project stakeholders and general public by posting at SEB website for viewing. Summaries of grievances (especially, the findings of grievance investigations, resolutions/ commitments made, ongoing and accomplished) shall also be available at SEB website. Media releases shall be conducted to inform project stakeholders and general public of the availability of these documents, important project milestones, or statements of project related issues that need clarification.

9.7.1.5 Resources and Responsibilities

Project Services Team (PST) of Project Execution Team (PET) from SEB's Project Delivery Department (PD), is generally responsible for the Stakeholder Engagement Plan. Stakeholder engagement activities organized by PST shall be supported by

other relevant PET members as well as are various SEB Corporate Services such as CSR, Corporate Communications, Government Relations, Community Relations, Event Management and Protocol, etc. Communication strategies that are to be taken by PST with the support of SEB Corporate Services will employ proactive communication plans and engagements with various project stakeholders.

The responsibilities of the PST with regards to the Stakeholder Engagement Plan include but not restricted to:

- Liaison with the relevant government agencies, affected communities, and other strategic stakeholders.
- Disseminate project information.
- Provide timely communication to stakeholders and key stakeholders.
- Create news releases, information and presentation materials.
- Develop and maintain interaction with stakeholders.
- Involve in joint projects.
- Update the Stakeholder Engagement Plan.

9.7.1.6 Management Functions

The implementation of the Stakeholder Engagement Plan will involve various internal parties within SEB. The management roles of the stakeholder management team include Corporate Affairs Manager and Community Liaison Team (CLT) comprising, Administration Unit and Integration/Support Unit. These roles will be largely the responsibility of the existing PST of PET, and/or few other appointed SEB personnel. The team shall report to the BMTLP Project Manager, and who will bring matters which need further attention to higher management level.

The proposed organizational structure of the stakeholder management team for the implementation the stakeholder engagements is depicted in **Figure 9.7.1** below.

Figure 9.7.1: Proposed Organization Structure for Stakeholder Engagement

Apart from the general roles and responsibilities listed in **Section 9.4**, specific roles and responsibilities within SEB in relation to SEP are presented in **Table 9.7.1** below.

Table 9.7.1: Roles and Responsibilities

Stakeholders	Roles and Responsibilities
Project Manager	• Oversees the overall SEP process and implementation. • Brings matters which need further attention to higher management level.
Corporate Affair Manager	• Coordinates the development and evaluation of the Stakeholder Engagement Plan document including the communication strategy and budget to support stakeholder engagement activities. • Coordinates, communicates and monitors stakeholder engagement programs implementation with Community Development/ CSR Officer. • Manages and monitors stakeholder behaviours toward project activity. • Identify the local stakeholders' potential risk and impact/problems due to project activity. • Communicates all major grievances to BMTLP Project Manager / SEB managements.

Stakeholders	Roles and Responsibilities
Community Development/ CSR Officer	• Develop and maintain relationships with affected communities, vulnerable groups, government officials, media and public in general. • Develop and proposes strategic stakeholders' engagements. • Manage grievance mechanism - record and document stakeholder grievances in the grievance register. • Plan, propose and implement community development and social programs in accordance with PEP, budget and the objectives and policy of SEB. • Monitor the implementation and progress of Corporate Social Responsibility (CSR) programs at site and provides consultation where necessary. • Develop and supervise the update of stakeholder database and stakeholder's commitment register. • Act as secretary of the stakeholder management team. • Prepare reports or documents on stakeholder engagement.
Community Liaison Team (CLT)	• Assist the development of stakeholder engagement program and activities. • Implement stakeholder engagement program and activities with the direction from Community Development/CSR Officer. • Record and document stakeholder engagement activities. • With guidance from Community Development/CSR Officer develop and maintain stakeholders' database and commitment register. • Assist Community Development/CSR Officer in managing grievance mechanism and grievance resolution process. • Assist Community Development/CSR Officer in preparing reports on stakeholder engagement.

9.7.1.7 Capacity Building for Stakeholder Engagement

Capacity building for stakeholder engagement should involve both the Proponent and the stakeholders, especially the affected local communities. Within PET/SEB including the contractors, the internal capacity building for stakeholder engagement could be enhanced by conducting appropriate trainings/workshops with the objectives (among others):

- To improve understanding of stakeholders and stakeholder engagement process on the project context, rationale and principles, its dynamics and relevance to HSAP.

- To enable participants to examine/ reflect on different steps/processes of stakeholder engagement in order to decide appropriate approaches / methodologies in engaging the stakeholders.

Project stakeholders/affected communities should also be equipped / trained to be able to participate meaningfully in their engagements/ consultations. Practical approaches in capacity building for stakeholder engagement among local communities largely revolve around providing understandable information about the project such as visuals, flyers/pamphlets, presentations, demonstrations, etc. (i.e., project activities, and potential beneficial and adverse impacts).

9.7.1.8 Corporate Social Responsibilities

Sarawak Energy should commit to advance its CSR programmes in line with its aims to strengthen relationships with the stakeholders particularly the affected local communities and manage stakeholder expectations. CSR programs/ initiatives which could be implemented among others:

- Creation of economic opportunities by employing local people and/or giving local firms and vendors opportunities in good and service businesses whenever practical.
- Developing and implementing social investment programmes in partnership with local communities in:
  - Youth training/education for suitable skills
  - Environmental management and conservation
  - Cultural and heritage preservation
  - Community development and entrepreneurship
  - Provision of electricity supply
  - Telephone and internet connectivity initiatives

9.7.1.9 Prioritising Indigenous Peoples Rights

The Stakeholder Engagement Plan is developed to ensure the communities, who are also the Indigenous Peoples are sufficiently and meaningfully consulted throughout the entire project. The project is committed to upholding the rights of Indigenous People through Free, Prior and Informed Consent (FPIC) so that they have equal access to understand and learn about the project's overall benefits and adverse impacts on their livelihoods and surrounding.

Consultation and engagement with the Indigenous Peoples will continue throughout the duration of the project. Project development plan will be updated progressively through discussions via direct visitations to communities' longhouses. As project develops, the needs and issues arising from the project might change and affect the Indigenous Peoples in different ways. In order to uphold of "FPIC", project development will be updated constantly through direct visitation of Liaison Officers or meetings initiated by the Project Service Team. Progressive update on the project development would help to address uncertainty, misunderstanding and untoward grievances among the Indigenous communities.

In the case of potential negative impacts, the Indigenous People's choices and decisions will be consulted through proper mitigation process. All the Indigenous People will be involved in the consultation process including the vulnerable groups of elderly and women. This method upholds the "Free" consent of the Indigenous Peoples.

The role of the community leaders will be to facilitate the visitation and consultation process between the communities, project proponent and relevant government authorities. The decision of community leaders alone will not be taken as the sole representation of the Indigenous Peoples. The Indigenous Peoples community will be given freedom in term of time, space and support to participate in the decision-making process. The role of Indigenous Peoples in the project is long term and they are essential partner to the project proponent. Their voices must be taken into consideration throughout the process of the project development.

The Stakeholder Engagement Plan work towards participation of all stakeholders including Indigenous Peoples in encouragement for them to play an inclusive and active role in the long-term project. The sharing of roles, responsibilities of all stakeholders and the consideration of taking into account their concerns and suggestions in FPIC manner inevitably influence the wellbeing of the overall project development.

Table 9.7.2: Stakeholder Engagement Plan

Stakeholders	Phases	Management Plan / Purpose of Engagement	Responsibility	Monitoring Indicators	Timing and Frequency	Reporting Requirement
A. High Power, Highly Interested Stakeholders (Manage Closely)						
Sibu and Kapit Resident Offices; Kanowit, Song, Kapit and Bukit Mabong District Offices	Implementation Operation	• High level project briefing and progress updates; seeking assistance in engaging relevant government agencies, community leaders and local communities. • Inform communities about details of construction activities (e.g., employment opportunities, schedule, timing of noise activities, traffic including movements of oversized loads) by notice board, posters and community meeting.	• Project Manager • Regulatory and Permitting Department	• Official correspondences; Face-to-face/ online meetings	Implementation phase: Notification of project commencement, quarterly project update; or whenever urgent and important issues raised. Operational phase - When necessary	• Meeting minutes • Stakeholder register
Land and Survey Department (LSD)	Implementation	• Assistance in land surveying, acquisition and transfer, and payment of land and crop compensations.	• Project Manager • Land and Wayleave Department	• Official correspondences • Record of transactions	Quarterly update on land acquisition process, until the process completion; or whenever urgent issues raised.	• Official correspondence • Stakeholder register
Community Leaders	Implementation Operation	• Notification of project associated activities; project progress updates. • Local contents. • Exploring concerns/ issues affecting the local communities and seeking possible mitigation measures. • Inform residents about details of construction activities (e.g., employment opportunities, schedule, timing of noise activities, traffic including movements of oversized loads) by notice board, posters and meeting.	• Project Manager • Land and Wayleave Department • Regulatory and Permitting Department	• Official correspondences • Social dialogue • Perception survey	Implementation phase: Notification of project commencement, quarterly project update; or whenever urgent and important issues raised. Operational phase - When necessary	• Official correspondence • Meeting minutes • Feedback form • Grievance form • Stakeholder register
Directly affected communities	Implementation Operation	• Notification of project associated activities, details of construction activities (e.g., employment opportunities, schedule, timing of noise activities, traffic including movements of oversized loads) by notice board, posters and meeting. • Seeking their cooperation in land surveying and crop counting, and compensation. • Addressing grievances.	• Project Manager • Land and Wayleave Department • Regulatory and Permitting Department	• Official correspondences • Pamphlets • Face-to-face meetings/ discussions • Perception survey	Implementation phase: Notification of project commencement. Meetings at project-affected communities at least one week prior to actual works onsite. Subsequently, quarterly face-to-face meeting/discussions at project-affected communities are strongly recommended. Community meeting shall be carried out whenever urgent and important issues raised. Operational phase - When necessary	• Meeting minutes • Feedback form • Grievance form • Stakeholder register
B. High Power, Less Interested Stakeholder (Keep satisfied)						
Natural Resources an Environmental Board (NREB)	Implementation Operation	• Project progress updates. • Monitoring of environmental impact during construction/implementation and operational phases.	• Project Manager • HSSE Department	• Official correspondence	Quarterly	• Environmental Monitoring Report (EMR)
Department of Environment (DOE)	Implementation Operation	• Project progress updates.	• Project Manager • HSSR Department	• Official correspondence	When necessary	• Official correspondence
Sarawak Rivers Board (SRB)	Implementation	• Riverine access and necessary permits for transportation of materials.	• Project Manager • Regulatory and Permitting Department	• Official Correspondence	When necessary	• Official correspondence
Construction Industry Development Board (CIDB)	Implementation Operation	• Application of workers CIDB card, CIDB levy.	• HSSE Department	• Official correspondence	When necessary	• Official correspondence

Stakeholders	Phases	Management Plan / Purpose of Engagement	Responsibility	Monitoring Indicators	Timing and Frequency	Reporting Requirement
Department of Labour Sarawak/ Jabatan Tenaga Kerja (JTK) Sarawak	Implementation Operation	• Workforce and labour matters and work permits.	• Project Manager • Regulatory and • Permitting Department	• Official correspondence	When necessary	• Official correspondence
Ministry of Finance	Implementation	• Approval the material Import Tax and Sales and Service Tax exemption application.	• Project Manager • Contract and Procurement Department	• Official correspondence	When necessary	• Official correspondence
Electrical Expectorate Unit	Implementation	• Relevant checking/ monitoring and licensing.	• Project Manager	• Official correspondence	When necessary	• Official correspondence
Ministry of International Trade and Industry (MITI)	Implementation Operation	• Contractual matters especially in material procurement.	• Project Manager • Contract and Procurement Department	• Official correspondence	When necessary	• Official correspondence
Department of Occupational Safety and Health (DOSH)	Implementation Operation	• Occupational safety and health of construction matters and certification of competency for personnel; communicate on Stop-Work Order on non-compliances found.	• Project Manager • HSSE Department	• Official Correspondence	When necessary	• Official correspondence
Immigration Department of Sarawak	Implementation	• Approval of work permit application for non-Sarawakian/ Malaysian personnel.	• Project Manager • Project Services Department	• Official correspondence	When necessary	• Official correspondence
Royal Malaysian Customs Department (RMC)	Implementation Operation	• Approval of HS code for imported equipment, prior to submission to MOF and Custom clearance of tax-exempted imported equipment.	• Project Manager • Contract and Procurement Department	• Official correspondence	When necessary	• Official correspondence
Sarawak State Attorney General's Chambers	Implementation Operation	• Contractual and land matters especially on disputes.	• Project Manager • Legal Department	• Official correspondence	When necessary	• Official correspondence
Majlis Adat Istiadat Sarawak	Implementation	• Matters which require advice on customary laws and tradition integration.	• Project Manager • Legal Department	• Official correspondence	When necessary	• Official correspondence
Sarawak Museum	Implementation	• Grave relocation and cultural heritage management plan if required.	• Project Manager	• Official correspondence	When necessary	• Official correspondence
C. Lower Power, Highly Interested Stakeholders (Keep informed)						
State Planning Authority (SPA)	Implementation Operation	• Project progress updates	• Project Manager	• Official correspondence	When necessary	• Official correspondence
Ministry of Utilities	Implementation Operation	• Project progress updates. • Communication on project relevant matters.	• Project Manager	• Official correspondence	When necessary	• Official correspondence
Economic Planning Unit (EPU)	Implementation Operation	• Project progress updates.	• Project Manager	• Official correspondence	When necessary	• Official correspondence
Regional Corridor Development Authority (RECODA)	Implementation Operation	• Project progress updates. • Access road utilization if required.	• Project Manager	• Official correspondence	When necessary	• Official correspondence
Upper Rajang Development Agency (URDA)	Implementation Operation	• Project progress updates.	• Project Manager	• Official correspondence	When necessary	• Official correspondence

Stakeholders	Phases	Management Plan / Purpose of Engagement	Responsibility	Monitoring Indicators	Timing and Frequency	Reporting Requirement
Jabatan Kerja Raya Sarawak (JKR)	Implementation Operation	• Project progress updates. • Temporary and permanent access road utilization.	• Project Manager • Regulatory and Permitting Department	• Official correspondence	When necessary	• Official correspondence
National Institute of Occupational Safety and Health (NIOSH)	Implementation Operation	• Notification on the occupational safety training and consultation needed for the project.	• Project Manager • HSSE Department	• Official correspondence	When necessary	• Official correspondence
Police Fire and Rescue Department (Bomba)	Implementation Operation	• Notification of safety matters; involvement in emergency responses.	• Project Manager • Regulatory and Permitting Department	• Official correspondence • Phone call	When necessary	• Official correspondence • Emergency response
State Security and Enforcement and National Security Council	Implementation Operation	• Project progress updates. • Enforcement of safety upon execution phase of project.	• Project Manager • HSSE Department	• Official correspondence	When necessary	• Official correspondence
Indigenous people associations (NGOs) - PKPB, PKNAK, SNDU, SADIA	Implementation Operation	• Notification, and seeking assistance in dissemination of project information; cooperation in project activities; gathering feedbacks on relevant issues and concerns.	• Project Manager • Project Services Department	• Official correspondence • Engagement programmes	When necessary	• Official correspondence Feedback form • Grievance form • Stakeholder register
Mass Media (newspapers etc.)	Implementation Operation	• Mass dissemination of project information and notification of stakeholders especially people staying nearby the project area, where the works might affect their daily life; and provide positive information to public.	• Project Manager • Project Services Department	• Social media notification • Press releases	When necessary	• Official correspondence Feedback form • Grievance form
D. Low Power, Less Interested Stakeholder (Monitor)						
Political groups	Implementation Operation	• Project matters and encourage support to the Project to the public.	• Project Manager	• Official correspondence • Press releases	When necessary	• Official correspondence • Grievance form
Forest Department Sarawak (FDS)	Implementation	• Project progress updates	• Project Manager	• Official correspondence	When necessary	• Official correspondence
Sarawak State Health Department	Implementation	• Notification of and assistance in health cases related to infectious diseases, vector-borne diseases etc.	• Project Manager • HSSE Department	• Official correspondence	When necessary	• Official correspondence
Jabatan Bekalan Air Luar Bandar (JBALB)	Implementation	• River siltation and water pollution matter upon project execution.	• Project Manager	• Official correspondence	When necessary	• Official correspondence
Indirectly affected communities	Implementation Operation	• Notification and communication, to assist and disseminate project information, issues and concerns to be communicated.	• Project Manager, Land and Wayleave Department • Regulatory and Permitting Department	• Official correspondence Engagement programme • Press releases	When necessary	• Official correspondence • Grievance form • Stakeholder register
Private businesses (Forest Timber and Plantation Licensees, oil palm plantations)	Implementation Operation	• Necessary action and information on relevant matters on forest timber and plantation in the vicinity of the project site. Temporary and permanent access logging/plantation roads utilization.	• Project Manager • Project Services Department	• Official correspondence	When necessary	• Official correspondence • Grievance form • Stakeholder register

9.7.1.10 Monitoring and Reporting Stakeholder Engagement Activities

In order to record activities and assess the effectiveness of the Stakeholder Engagement Plan and associated stakeholder engagement programmes/ activities, PST will implement a data management and monitoring process as outlined below. Mechanisms for reporting to external stakeholders will be provided as an integral step in building relationships with stakeholders and promoting understanding between SEB and the public, particularly the project stakeholders.

9.7.1.10.1 Stakeholder Involvement in Stakeholder Engagement Plan Monitoring

Monitoring of SEP is the process of monitoring project stakeholder relationships and tailoring strategies for engaging stakeholders through modification of engagement strategies and plans. The process will involve many meetings and coordination efforts, which shall be minuted. It also includes survey of people's awareness and perception study (**Section 9.7.1.10.3**). The important benefit of this process is that it maintains or increases the efficiency and effectiveness of stakeholder engagement activities as the project evolves and its environment changes.

9.7.1.10.2 Reporting to Stakeholders

Once consultation with stakeholders has taken place, stakeholders generally want to know which of their suggestions have been considered, what risk or impact mitigation measures will be put in place to address their concerns, and how, for example, projects impacts are being monitored. It is recommended to keep track of commitments made (commitments tracker) and to communicate progress made against these commitments on a regular basis. For this project, external reporting should be developed on a monthly basis by PST.

9.7.1.10.3 Affected Communities Perception Survey

A perception survey examining the experience and feedback of affected communities will be conducted twice during the project's lifecycle: once at the end of construction and again after 3 years of operation.

The results of these surveys will be carefully reviewed in order to identify any improvements or adjustments in project processes and procedures that may be required in order to reduce impacts or increase efficiency.

9.7.1.10.4 Stakeholder Engagement Plan Monitoring and Reporting Framework

PST will be responsible in maintaining a stakeholder register in which all information on stakeholders will be recorded. Information such as contact details, date of engagement and engagement report including the follow-up requirement will be incorporated in the register. The register is a live document which will be updated continuously throughout the lifespan of the project.

Through communication channels and meetings (formal and informal) and periodic consultation meetings, PET/ SEB will monitor and provide feedback as appropriate to the stakeholders. PST will be responsible for:-

- Providing the PET with a weekly report detailing the number and status of complaints.
- Any outstanding issues to be addressed.
- Monthly reports, including analysis of the type of complaints, levels of complaints, actions to mitigate complaints and need for further mitigation measures.

Should future important public consultation meetings or stakeholder engagement be arranged at venues to enable stakeholders to participate, an open logbook (with pens provided) can be positioned in a suitable location for recording comments. Likewise, Grievance Forms (**Appendix 10.4.1**) can be submitted. The information will be recorded so that a response and feedback can be made to stakeholders.

The proposed monitoring requirements are shown in **Table 9.9.1**.

9.7.2 Land Acquisition and Livelihood Restoration Plan

SEB is responsible to implement this Land Acquisition and Livelihood Restoration Plan with assistance from relevant government agencies where necessary.

The project involves compulsory land acquisition for the 50 m width strip of lands along the 177 km transmission line route. Temporary land acquisition is also expected for temporary project uses such as jetties and base camps. These lands are currently dominated by secondary growth as results of the past agricultural activities and also some cultivated areas which largely fall under native customary rights (NCR) as well as titled lands.

As the transmission line route has avoided all existing settlements and permanent structures, there is no physical displacement of the affected communities which requires resettlement or relocation. Hence, this Land Acquisition and Livelihood Restoration Plan addresses only land acquisition procedure and the issues of economic displacement/livelihood restoration.

9.7.2.1 Legal Framework

9.7.2.1.1 Sarawak Land Code (Chapter 81, Laws of Sarawak)

Sarawak Land Code (The Land Code) governs all matters relating to land tenure, registration of titles relating to land, transfer of land, leases and charges in respect of land and easement and other rights and interests in land in Sarawak.

Section 46(c) of the Land Code states provision that empowers the Government/State (in this case SEB which is a public company wholly owned by the Sarawak Government) to make compulsory acquisition of the lands for the project. It cited as follows:

> *"Land may be resumed by the Government whenever it is required for any of the following purposes - (c) the provision or improvement and development of roads and means of communications and any public utility or public services, whenever undertaken or managed, or to be undertaken or managed, by the Federal or State Government or by a public body or private enterprise or otherwise howsoever."*

The process of compulsory acquisition of land is also governed by three other sections of the Land Code, namely Sections 47, 48 and 49.

Section 47 is concerned with the power to enter and survey and to determine the compensation for the land to be acquired and damages due to the loss of the crops and other structure, as well as dealing with any dispute about the legitimate ownership of land and compensation.

Section 48 is concerned with declaration and procedure for declaration of the land required for public purpose.

Section 49 is concerned with the plan of the said land to be made and serving notice.

As the LSD is the enforcer of the Land Code, they are mandated to handle the implementation of the sections of the Land Code as mentioned above.

9.7.2.1.2 Electricity Ordinance (Chapter 50, Laws of Sarawak)

Electricity Ordinance (Chapter 50) (Amended 2007) deals with the protection and maintenance of power line, its installation and public safety. Section 36 of the ordinance provides the mandate for the State Cabinet Committee (Majlis Mesyuarat Kerajaan Negeri) to make rules cited as Electricity Rules, 1999. Installation of aerial line operating at high or extra high voltage is governed by **Rule 43.** The rule has 13 sub-rules ((a) to (m)) regulating the protection and maintenance of power line and its installation and also public safety.

It should be noted that, among all these sub-rules, Sub-rule (j) related to maintaining Right of Way (ROW) has implication for the affected land owners to surrender the area of land concerned to the authority for the purpose of protection and maintenance of power line and its installations and public safety. It is cited as:

> *"no person shall, without the lawful authority of the owner, management of licensee of the installation, as the case may b, undertake any work or engage in any activity within 4.75 meters of a conductor"*

However, for technical requirements of the project, SEB has decided to acquire 25m on both sides of the transmission line (i.e., 50m wide strip of land), and this technical requirement overrides the 4.75 m distance as stipulated in Sub-rule (j).

9.7.2.2 Institutional Arrangement

The roles and responsibilities of related parties in taking the initiatives in addressing the land acquisition of the proposed project are listed below:

Government Agencies	Responsible
State Planning Authority (SPA)	Approve Project Siting Application
Ministry of Urban Development and Natural Resources (MUDeNR)	Approve Section 5,6(4), 47 and 48
Land and Survey Department (LSD)	Government authority responsible for land matters, the administration of land tenure and deposition of the land within the Permit boundary: • Process site application • Site measurement • Execute and supervise land acquisition • Gazetting and ownership
Client/SEB	Submission of application for project site Carry out join site assessment with Divisional LSD Endorse site acceptation Prepare and implement Land Acquisition and Livelihood Restoration Plan to international standards, including: • Engagement with affected households/communities, prior to surveys and to disclose the entitlement framework; • Household survey of all (100%) affected households; • Land and crop survey of all (100%) of affected plots, including those with formal legal titles, NCR lands, and other plots that may be neither titled or NCR land; • Determination of eligibility and entitlements, and presentation of these in an entitlement framework, including formal government rates of compensation and additional allowances to ensure that all affected are entitled to cash compensation or replacement land and additional assistance; • Measures for livelihood restoration including transitional allowances; • Monitoring requirements. Provide fund for compensation, land premium and other costs

The proposed Land Acquisition and Livelihood Restoration Plan for the ESMP is outlined in the following **Table 9.7.3**.

Table 9.7.3: Land Acquisition and Livelihood Restoration Plan (LALRP)

Impact / Issues	Phase	Management Plan	Timing and Frequency	Monitoring Indicators	Reporting Requirement and Applicable Standards
Compulsory Land Acquisition	Pre-Construction	• Make reference to mitigation measures recommended in **Chapter 8, Sections 8.5.1, 8.5.3, 8.5.5 and 8.5.7**. • Land acquisition procedures shall be carried out according to the legislative requirements of Sarawak i.e., Sarawak Land Code (Chapter 81), Electricity Ordinance (Chapter 50), Electricity Rule, 1999; to ensure that all affected landowners are protected from adverse impacts on their livelihood, particularly if one is required to surrender the right to use one's land and or its ownership. • LALRP to be prepared and implemented according to international standards. • All land acquisition activities shall be handled by LSD. • Affected land owners are to be identified and informed prior to access for land surveying and crop-counting. Currently, an estimated 330 plots of land are affected, which involved 330 households. The Proponent, the Contractor, and the landowners should maintain constant contact to ensure all parties are accurately informed of activities. • Prioritize compensation payments for immediate loss of crop as compensation for the permanent acquisition of land is only paid upon the survey of the completed project. Rate of compensation shall take note of the prevailing economic situation, labour costs, materials and the conditions of the specific crops and the market price for crops. Any transaction costs such as administrative charges, taxes and registration costs will be borne by the Proponent. • As far as possible promote land-for-land (in-kind) compensation above cash compensation. • Provision should be made to ensure that those who have no land rights (even no NCR rights) are entitled to support to obtain replacement land and to restore their livelihoods. • If the acquisition of part of the land makes the rest of the land significantly smaller (i.e., orphan land) and that way the economic interest of the owner to use the rest of the land decreases, then that part of land may also be acquired at the request of the owner. Alternative income earning	Before the start of construction	Visual verification at site or location of project activities Land transaction record / document Photograph record Database of affected households and plots including all survey results Livelihood restoration monitoring	Minutes of Meeting Grievance Register Sarawak Land Code (Chapter 81) Electricity Ordinance (Chapter 50) Electricity Rule, 1999

Impact / Issues	Phase	Management Plan	Timing and Frequency	Monitoring Indicators	Reporting Requirement and Applicable Standards
		opportunities should be provided, such as credit facilities, training, cash, or employment opportunities. ● Intensively engage/ communicate with the affected communities in order to enable the affected persons to create new opportunities for incomes. ● All the compensation process will be completed before the actual start of the project on the ground. ● All agreements reached will be documented and no verbal agreements should be made. Each affected household will have a formal agreement with SEB on their eligibility and entitlements. A formal agreement between community leaders and SEB is also recommended, providing evidence of FPIC (Free, prior and informed consent) for the transmission line. ● If affected land owners or households are not satisfied with the proposed compensation, their grievances shall be redressed through so called the "Grievance Mechanism", channelled through Project Services Team (PST) under Project Execution Team (PET).			
Interference on Local Villagers' Activities (Temporary Economic Displacement)	Construction	● Compensation for this land will also be set out in the entitlement framework in the LALRP. ● Construction related activities will be organized in a way to avoid and minimize economic displacement, i.e., by ensuring access is retained to villages and agricultural lands, and effects during harvest periods are very carefully managed. ● Use of signs, dangerous warning signs, barriers, and education/public outreach to prevent local villagers contact with potentially dangerous equipment or situation. ● Compensate land owner whose land is taken temporarily or restricted due to construction work. Compensation for the restrictions on the right of land ownership shall be determined according to the amount of the lease reached at the market for that kind of land. ● If damage is caused to the owner of the land by the restriction on the right of land ownership, the owner shall have the right to damage compensation. The damage compensation shall be determined on a case-by-case basis by an expert in accordance with the existing law. ● If the characteristics of the land are destroyed by the temporary occupation so it cannot be used in the manner and for the purpose it has been used before the temporary occupation, compulsory land acquisition may be	During construction	Visual verification at site or location of project activities Photograph record	Minutes of Meeting Grievance Register

Impact / Issues	Phase	Management Plan	Timing and Frequency	Monitoring Indicators	Reporting Requirement and Applicable Standards
		required. Negotiation shall be carried with the landowners, and complete acquisition of those land should be carried out before the day of ending the temporary occupation. ● Provide assistance to severely affected land owner and vulnerable household when necessary. This can be additional cash and in-kind assistance. ● For temporary land leased for the project onsite support facilities (0.8 ha.), on completion of all construction work, all temporary land utilized will be rehabilitated, re-vegetated and in turn become possibly more useful land for local communities. ● Refer to Site Rehabilitation Plan – **Section 9.8.8**.			
Damage to Community Facilities	Construction	● SEB shall ensure that the Contractor undertake immediate repair to any damage caused by the project to community facilities such as gravity feed water supply pipelines, weir, power supply, roads, drainage and the like. ● If compensation is to be paid to affected parties, the Contractor will be held responsible for damages.	During construction	Visual verification at site or location of project activities Photograph record	Minutes of Meeting Grievance Register
Permanent Access Effects	Operation	● Project design shall have provisions to ensure accesses in local communities are retained by the inclusion of jetties and bridges whenever necessary. ● Existing local roads shall be maintained or improved to serve local communities.	During construction	Visual verification at site or location of project activities Photograph record	Minutes of Meeting Grievance Register

9.7.3 Cultural Heritage Management Plan including Chance-Finds Procedure

9.7.3.1 Objective

The objectives of the Cultural Heritage Management Plan are as follows:

- To create a registry of tangible and intangible cultural heritage assets at the proposed site.
- To verify the associated risks and impacts of the project on the tangible and intangible cultural heritage assets.
- To propose measures to avoid, minimize, mitigate, and compensate cultural heritage risks and impacts at the project area.
- To establish a management plan with clear sets of actions and responsibilities for the control of impacts affecting cultural heritage assets at the project area.
- To outline a Chance-Find Procedure to manage the discovery of Chance-Finds during the construction phase of the project.

The following definitions adopted from Malaysia National Heritage Act 2005 and Sarawak Cultural Heritage Ordinance 2019 are of relevance within the Cultural Heritage Management Plan:

- **Cultural heritage** is defined as tangible and intangible form of cultural property, structure or artefact and may include a heritage matter, object, item, artefact, formation structure, performance, dance, song, music that is pertinent to the historical or contemporary way of life in Sarawak, on or in land or underwater heritage of tangible form but excluding natural heritage.
- **Intangible cultural heritage** includes any of expressions, languages, lingual utterances, sayings, musically produced tunes, notes, audible lyrics, songs, folksongs, oral traditions, poetry, music, dances as produced by the performing arts, theatrical plays, audible compositions of sounds and music, martial arts, that may have existed or exist in relation to the heritage of the local community.
- **Tangible cultural heritage** includes area, monument, and building, sacred spaces such as rocks, waterfalls, whirlpools, trees, groves.
- **Monument** means any building, standing stone, *keramat*, cave or other structure, erection or excavation and any tomb, tumulus or other place of interment or any other immovable property of a like nature or any part or remains of the same, which ought to be preserved as a heritage of the people

by reason of the cultural, architectural, archaeological, religious, historic, traditional interest.

- **Antiquity** means any object whether movable or immovable or a part of the soil or underwater within the territory of Sarawak, which has been constructed, shaped, painted, carved, inscribed, erected, or otherwise produced or modified by human, nonhuman agency (supernatural) and which is or is reasonably believed to be at least fifty years old[2].

In addendum, the following definitions for Tangible Cultural Heritage are also used in the Cultural Heritage Management Plan:

- **Immovable cultural heritage** means tangible cultural heritage attached to the ground with a foundation and which can be moved only dismantling and shall include sites where cultural heritage have been discovered, paleontological historical places, memorial places, monuments, remains of ancient village, burial places, places of worship.
- **Movable cultural heritage** means tangible cultural heritage not attached to a foundation and can be moved from place to place easily and shall include paintings, sculptures, statues, coin, stone, human remains, paleontological remains, cultural objects.

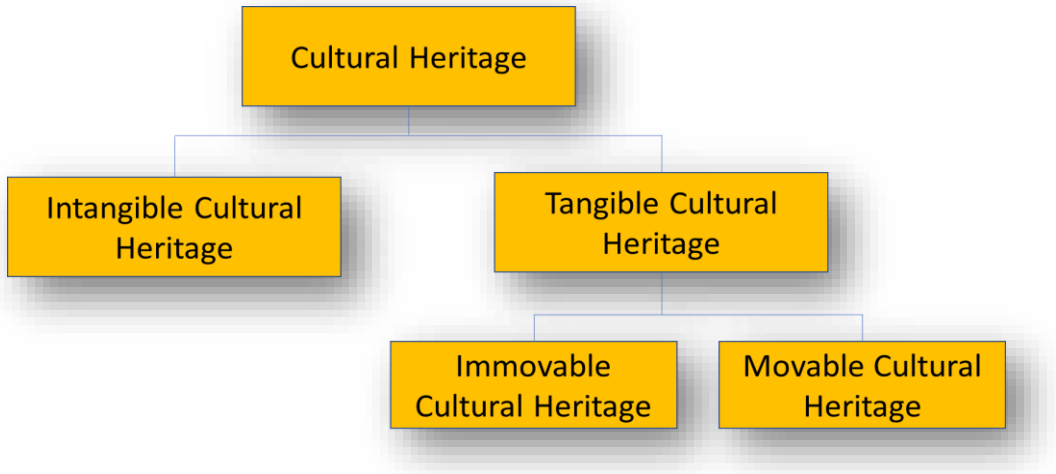


Figure 9.7.2: Types of Cultural Heritage in Cultural Heritage Management Plan

[2] In accordance to Sarawak Heritage Ordinance 2019 Part I (2)(1) interpretation of "antiquity" means object of at least fifty years old.

- **Chance-Find** means any cultural heritage site or associated object encountered during construction works, as opposed to a find made in the course of intentional archaeological investigation. Chance-Find include, but are not limited to artefacts, archaeological deposits, ruins, monuments and human remains.

9.7.3.2 Roles and Responsibilities

SEB has the responsibility to provide cultural heritage management and to structure and coordinate cultural heritage management procedures for the stakeholders involved in the project.

The roles and responsibilities for the implementation of the Cultural Heritage Management Plan are presented in **Table 9.7.4** below.

Table 9.7.4: Roles and Responsibilities

Stakeholders	Roles and Responsibilities
Project owner / Project Proponent	• To be involved and in charge of all matters pertaining to cultural heritage management and protection. • To avoid impacts on known sites of cultural heritage completely, by selection of the route of the transmission line • To disclose all information needed to ensure Sarawak Museum Department can carry out its functions and to enable the affected community to reach free, prior informed decisions regarding the protection of their heritage. • To provide all necessary assistance to Sarawak Museum Department and the affected community in protecting the cultural heritage of the area. • To maintain a register of heritage sites and artefacts identified in the project area. • To record and disclose the results of consultation and decisions reached by all stakeholders regarding measures to protect or manage cultural heritage. • To ensure effective monitoring and evaluation and when required amend the Cultural Heritage Management Plan in consultation with the other stakeholders to improve the protection and management of cultural heritage. • To ensure ongoing identification and management of cultural heritage through dialogue and training among its workforce and contractors.

Stakeholders	Roles and Responsibilities
Sarawak Museum Department	• To ensure SEB and the affected community understand the Sarawak Museum Department's functions under the Sarawak Cultural Heritage Ordinance 2019 and applicable International Standards in achieving best practice in cultural heritage protection. • To recommend measures for protection and management of cultural heritage for consideration by SEB and affected community. • To deploy experienced and qualified experts to identify heritage sites and antiquities when requested by the project owner. • To deploy experienced and qualified experts during a reported Chance-Find by project owner. • To facilitate and mediate in discussions between project owner and affected community for the purpose of resolving claims for compensation or where applicable, apply the provisions of the Ordinance or relevant codified customary laws in matters relating to compensation.
Council for Native Customs and Traditions	• To facilitate and advise project owner and affected community on matters related to traditions and customs of affected cultural heritage assets. • To mediate in discussions between project owner and affected community for the purpose of resolving claims for compensation on affected cultural heritage sites.
District Officer	• To facilitate and mediate in discussions between the project owner and affected community for the purpose of resolving claims for compensation on affected cultural heritage sites. • To assist the project owner, Sarawak Museum Department, cultural expert in verification processes of cultural heritage assets.
Communities	• To ensure the community are properly represented for the purposes of consultation and at meetings and site visits. • To cooperate and assist the project owner and Sarawak Museum Department in identifying heritage sites and measures to protect their cultural heritage assets.
Contractors / Sub-contractors	• To ensure the procedures for Cultural Heritage Management Plan is properly implemented. • To provide information and training on Cultural Heritage Management Plan to staff working on project site. • To report on Chance-Find and adhere to the Chance-Find procedure even if work will be interrupted.
Staff working at project site	• To be familiar with procedures for the management of cultural heritage assets at the project site through training and courses

Stakeholders	Roles and Responsibilities
On call / On site cultural expert	• To prepare written report, analyses and recommendations on the management of cultural heritage assets. • To liaise with Sarawak Museum Department on the progress of determination of cultural heritage sites, objects after a reported Chance-Find. • To provide information and training on Cultural Heritage Management Plan when required by project owner. • To coordinate with expert assigned by Sarawak Museum Department in verifying the status of assets discovered during Chance-Find.

9.7.3.3 Development of Cultural Heritage Management Plan

The Cultural Heritage Management Plan is an overarching plan that stipulates how affected cultural heritage assets will be managed from the BMTLP construction phase until project commissioning phase.

The Cultural Heritage Management Plan will be acceptable to community and respectful of local traditions and cultural norms. The Cultural Heritage Management Plan endeavour to preserve and protect the cultural heritage in situ and allow for continued community access to the heritage site.

The development of Cultural Heritage Management Plan involves the following process as detailed in (see **Figure 9.7.3**) and **Table 9.7.5** below:

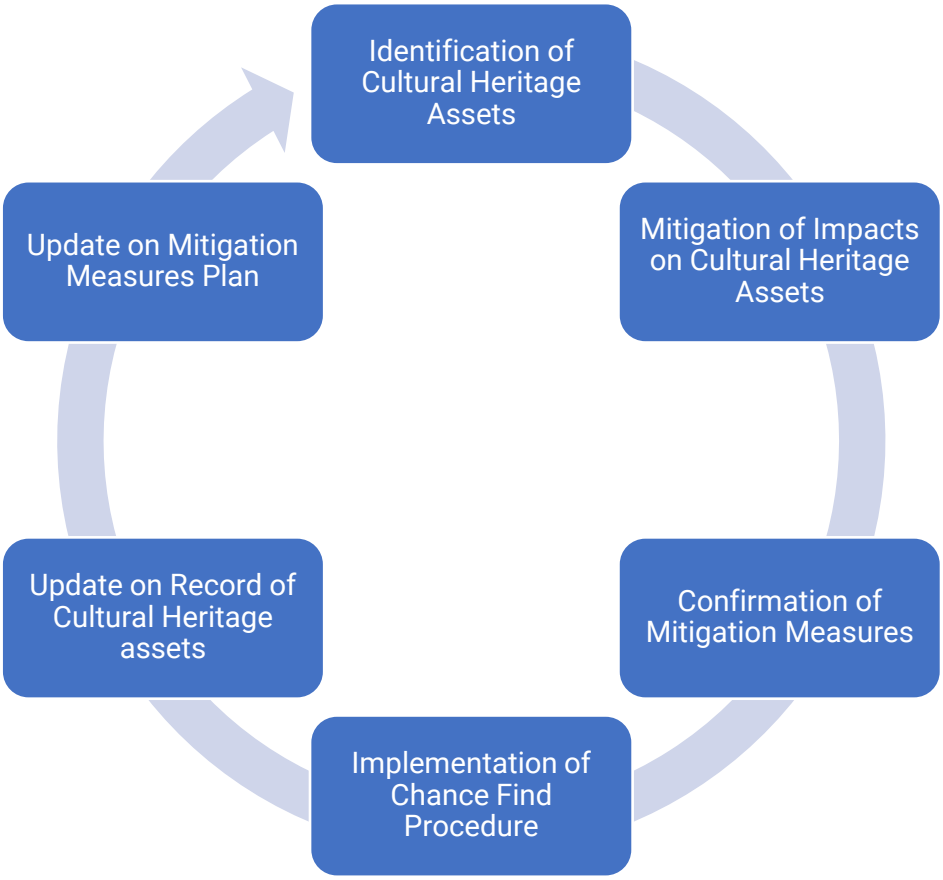


Figure 9.7.3: Cultural Heritage Management Plan Development Process

Table 9.7.5: ESMP – Cultural Heritage Management Plan

Impact / Issues	Phase	Management Plan	Timing and Frequency	Monitoring Indicators	Reporting Requirement and Applicable Standards
Avoidance of impacts	Pre-construction	Transmission line route selection to entirely avoid known sites of cultural heritage	During line survey work	-	Internal reporting Malaysia National Heritage Act 2005 Sarawak Cultural Heritage Ordinance 2019 Adat Iban 1993 Section 191
Mitigation of impacts on Cultural Heritage Assets	Pre-Construction	● Make reference to mitigation measures recommended in **Chapter 8, Section 8.6.1**. ● Process: Consultations between project owner and contractors on possible mitigation measures to be taken on the impact affecting the identified cultural heritage assets. ● Outcome: Proposal of mitigation measures on cultural heritage assets at project site.	Before the start of construction	Visual verification at site or location of project activities.	
Implementation of Chance-Find Procedure	Construction	This procedure is intended to manage the impacts to unknown cultural heritage assets or sites during construction phase. The procedure defines the step-by-step protocol to be taken in the event of any unanticipated cultural heritage assets or sites discovery during project construction. These protocols include: ● Immediate stop-work at the site of the Chance-Find. ● Notification to Site Supervisor, Site Manager, Project Manager. ● Installation of temporary site protection measures. ● Notification to relevant authorities (District Office, Sarawak Museum Department). ● On-site /On-call cultural specialist perform preliminary evaluation on the Chance-Find. ● If the cultural specialist determines the Chance-Find to be a cultural heritage site or asset, a report will be submitted to District Office, Sarawak Museum Department. ● Cultural specialist will initiate discussions with Sarawak Museum Department about the measures to be taken on the Chance-Find. Sarawak Museum might be sending their own archaeologist or specialist to determine the status of the Chance-Find. ● Cultural specialist will update SEB and the contractor with progress updates.	During construction if there is chance find	Visual verification at site or location of project activities.	

Impact / Issues	Phase	Management Plan	Timing and Frequency	Monitoring Indicators	Reporting Requirement and Applicable Standards
		● Construction resumes at other part of the project while work at the protected site is temporarily halted. ● If the Chance-Find is confirmed to be cultural heritage asset or site, and if the heritage asset is moveable, SEB will coordinate with Sarawak Museum to arrange for the heritage asset to be transported. ● If the heritage asset is immoveable (such as burial grounds or graves) or if it is a heritage site (*tembawai*), SEB will need to revise the construction route or deviate construction to avoid the immoveable heritage asset or heritage site. ● The reburial or relocation of old graves is not encouraged and would be the last resort. If this cannot be avoided, all works related to exhumation and relocation of graves must be undertaken cautiously with great care, respect in accordance with the local communities' *adat* and rituals. Guidelines for Grave Relocation is provided in **Appendix 8.7.1** (**Chapter 8**). ● Mitigation measures will be undertaken with local community at the heritage site or immoveable heritage asset, or before transporting the moveable heritage asset. ● It is the responsibility of the Proponent to ensure that the construction practices follow all SMD recommendations.			
Confirmation of Mitigation Measures Plan	Construction	● Make reference to mitigation measures recommended in **Chapter 8, Section 8.6.1**. ● Process: Direct discussion with affected community or affected household on the proposed mitigation measures to be taken for the affected cultural heritage assets. ● In the case of disagreement with the proposed mitigation measures, SEB will seek help from local community leaders, District Office and/or Sarawak Museum Department, Council for Native Customs and Traditions for advice in dissolving the disagreement and if possible, with a better mitigation proposal. ● The revised mitigation measures will be represented and discuss with affected community. The feedbacks and concerns of affected community will be taken into account for the final mitigation proposal. ● Outcome: An agreed mitigation measures plan on cultural heritage assets at project site.	During construction if there is chance find	Visual verification at site or location of project activities.	

Impact / Issues	Phase	Management Plan	Timing and Frequency	Monitoring Indicators	Reporting Requirement and Applicable Standards
		● Mitigation measures plan will include Intangible Cultural Assets, Tangible Moveable Cultural Heritage Assets, Tangible Immoveable Cultural Heritage Assets.			
Update on Record of Cultural Heritage assets	Construction	● Process: The new cultural heritage asset discovered during Chance-Find to be included in the list of identified affected cultural heritage assets at the project site. ● Outcome: Updated record of affected tangible and intangible cultural heritage assets at the project site.	During construction	Visual verification at site or location of project activities.	
Update on Mitigation Measures Plan	Construction	● Process: The consented mitigation measures on the discovered cultural heritage asset will be included in the mitigation measures plan on cultural heritage assets at the project site. ● Outcome: Updated mitigation measures plan on cultural heritage assets at the project site.	During construction	Visual verification at site or location of project activities.	

9.7.4 Public Health Management Plan

The objective of this Public Health Management Plan is to prevent nuisance, health and safety effects on the community particularly during project construction.

SEB shall hold the responsibility in ensuring its personnel and Contractor adhere to the specified Public Health Management Plan requirements during the construction and operation phases of the Project.

Table 9.7.6: Public Health Management Plan

Impact / Issues	Phase	Management Plan	Timing and Frequency	Monitoring Indicators	Reporting Requirement and Applicable Standards
General Health	Pre-Construction Construction	• Make reference to mitigation measures recommended in **Chapter 8, Section 8.7**. • Enforce Public Health Management requirements on all Contractors and Sub-contractors to follow SEB policies and procedures. This can be included into the contract agreement. • Enforce Worker Code of Conduct that include rules on limiting interactions with local communities especially physical or sexual harassment, solicitation of prostitution, and alcohol or drug use; disciplinary action to be taken in such cases, to all Contractors and Sub-contractors. • In the event of any outbreak of illness of an epidemic / pandemic nature, the SEB and its Contractors should comply with and carry out such regulations, orders, instructions, rules and SOPs as may be made by the State Government, State Disaster Management Committee, Ministry of Health Malaysia (MOH), State Health Department, local medical and health authorities. • Refer to Ministry of Health Malaysia's Annex 25: Covid-19 Management Guidelines for Workplaces (**Appendix 9.7.1**). Other guidelines on Covid-19 are available at MOH's website (https://covid-19.moh.gov.my/garis-panduan/garis-panduan-kkm) • The general public/local residents shall not be allowed in high-risk areas, e.g., excavation sites and areas where heavy equipment is in operation. • As per the procedure for hiring workers (both local and foreign workers), medical/ health screening of workers shall be made compulsory. Regular health inspection shall be conducted for workers and their families staying on site. Foreign workers entering Sarawak / Malaysia for the first time shall be rigorously screened for infectious diseases. • SEB shall work collectively with Contractor in ensuring that no worker who has criminal record is employed at the project site.	Before the start of construction	Site inspection	DOSH's Guidelines for Public Safety and Health at Construction Sites The Protection of Public Health Ordinance, 1999; The Protection of Public Health (Compounding of Offences) Regulations, 2020 Prevention and Control of Infectious Diseases Act 1988(Act 342) Prevention And Control of Infectious Diseases (Measures Within Infected Local Areas) (Movement Control) (No. 4) (Amendment) (No. 16) Regulations 2021 [Act 342] Ordinan Darurat (Pencegahan dan Pengawalan Penyakit Berjangkit (pindaan 2021)
Public Health Surveillance	Construction	• Implement health surveillance program to monitor construction related activities impact on public health.	Annually	Health Surveillance Report	
Electrocution	Operation and Maintenance	• Make reference to mitigation measures recommended in **Chapter 8, Section 8.5.9**.	Daily	Visual observations and inspection (i.e.,	Monthly HSSE Report Regulation 38, Factories and

Impact / Issues	Phase	Management Plan	Timing and Frequency	Monitoring Indicators	Reporting Requirement and Applicable Standards
		● Formal notice of any maintenance work should be given in advance to the communities living close to the transmission line and access roads. ● The notice shall give details of the purpose of the access, the contact person and number of people to be involved, time frames and machinery that will be used. ● Use of signs, barriers and education / public outreach to prevent public contact with potentially dangerous equipment. ● Grounding conducting objects (e.g., fences or other metallic structures) installed near power lines, to prevent shock. ● Install spikes and barbed wires to prevent members of the public from climbing up transmission towers.		notice, signboards, warning signs, etc.) Photograph record Maintenance record Incidence record Complaints register.	Machinery (Safety, Health and Welfare) Regulations, 1970
EMF	Operation and Maintenance	● Make reference to mitigation measures recommended in **Chapter 8, Section 8.7.5**. ● Maintain minimum distances (at least 50 m from the transmission line centre line) and clearances as per standard norms. ● Signs and barriers will be installed to prevent access to high voltage areas. ● Public must be prohibited from entering the areas under construction or maintenance works. ● Train workers in the identification of occupational EMF levels and hazards. ● Once the line is operational, undertake initial measurements of the exposure levels to ensure that the public exposure levels are within the accepted limits as prescribed by ICNIRP. ● Awareness campaigns shall be organised to communities residing near to the transmission line route to explain what EMF is and that people should not build new permanent dwellings within the ROW. ● Undertake annual ground surveillance of the ROW to ensure that people are not building new dwellings within the corridor. ● Personal exposure monitoring equipment should be set to warn of exposure levels that are above occupational exposure reference levels. Implement action plans to address potential or confirmed exposure levels that exceed reference occupational exposure levels developed by ICNIRP.	Annually	EMF level	Malaysian Standard and International Commission on Non-Ionizing Radiation Protection (ICNIRP) Guidelines Internal reporting

9.7.5 Occupational Safety and Health Management Plan

The objective of Occupational Safety and Health management is to prevent nuisance, health and safety effects on workers and personnel during project construction. Monitoring of the proposed implemented OSH management plans is to be held responsible by the SEB team.

Table 9.7.7: Occupational Safety & Health Management Plan

Impact / Issues	Phase	Management Plan	Timing and Frequency	Monitoring Indicators	Reporting Requirement and Applicable Standards
OSH Management	Pre-Construction	• Refer to mitigation measures recommended in **Chapter 8, Section 8.8**. • Enforce safety and health requirements on all contractors and sub-contractors to follow SEB policies and procedures. This can be included into the contract agreement. • Engage reputable contractors with established and independent occupational health and safety policies and management systems which are complementary to the policy and management systems of the Proponent. • The Project Execution Team (PET) to ensure that the Contractor are using systematic and structured measure in managing OSH hazards and risk during project implementation in accordance with the following documents: 1. PMO-HSE-POL-3000 [Occupational Safety and Health Policy] 2. PMO-OSH-PCS-3300 [OSH Management Process] • PET shall ensure that the Contractor comply with Malaysian OSH legislation that are relevant to the OSH Management such as: 1. Occupational Safety and Health Act 1994 2. Factory and Machinery Act 1967 3. Construction Industry Development Board, Act 520 4. OSH guidelines mainly issued by DOSH, CID and Ministry of Health 5. Code of Practice (COP) mainly issued by DOSH, CIDB and Ministry of Health	Before construction	Contract document	Non-compliance Report (NCR) HSSE Site Stop Work Memo
OSH Management	Operation	**Health Surveillance:** • Implement health surveillance program if an employee exposed or likely to be exposed to chemical hazardous to health as recommended by the Assessor or Hygiene Technician in the assessment or monitoring report (Sec.28, OSHA 1994). • The health surveillance program must be conducted by an Occupational Health Doctor (OHD).	As recommended by the Assessor or OHD.	Chemical Health Risk Assessment (CHRA) Report Health Surveillance Result	Section 28, OSHA 1994.

Impact / Issues	Phase	Management Plan	Timing and Frequency	Monitoring Indicators	Reporting Requirement and Applicable Standards
		Accident Investigation and Reporting ● Contractor shall report any accidents, dangerous occurrence, occupational poisoning and occupational diseases to DOSH or other relevant authorities (Sec. 32, OSHA 1994).	On-going as required	Accident Investigation and Reporting Procedure Notification / Communication log Form JKKP 6/7/8/9/10	Section 32, OSHA 1994 NADOPOD Regulations, 2004.
		Personal Protective Equipment (PPE): ● Provide appropriate and adequate PPE as a temporary measure while waiting for more efficient control measure to be applied, or as an additional protection. ● PPE must be in accordance with standards approved by DOSH and provided without charging any fee or levy to the workers (Sec. 26, OSHA 1994).	On-going as required	PPE Procedure PPE Issuance and Inspection Record	SIRIM QAS International

9.7.6 Labour and Local Content Management Plan

SEB shall hold the responsibility in ensuring its personnel and Contractor adhere to the specified Labour and Local Content Management Plan requirements during the construction phase of the Project.

Labour and Local Content Management Plan are to enhance positive impacts on the economy and employment in project-affected communities, especially among low income and single-headed households.

Recruitment procedure should ensure that local people are employed wherever possible, and this is done in a fair, consistent, and transparent manner by the Proponent and its Contractors.

Workers from the settlements along the transmission line will be given priority for low skilled jobs such as vegetation clearance, security guards, cleaning, etc. To maximise local procurement, the Proponent should also require Contractors, as part of the tendering process, to develop a purchasing strategy stipulating how local purchase of goods and services will be optimised in particular with respect to transportation, waste management and disposal, and catering.

Table 9.7.8: Labour and Local Content Management Plan

Impact / Issues	Phase	Management Plan	Timing and Frequency	Monitoring Indicators	Reporting Requirement and Applicable Standards
Labour Management	Pre-construction, Construction and Operation	Refer to mitigation measures recommended in **Chapter 8, Section 8.5.5, 8.5.8** **Labour Policy:** ● Company policies must at least demonstrate the top management's commitment to comply with National labour legal requirements and to prohibit illegal employment, human trafficking or any practice of forced labour. All employees must be informed of the content of the policy and also any changes made to it by the employer. ● No use of child labour (workers under age 18) or forced labour is allowed. ● A worker's grievance mechanism will be in place. **Recruitment Policy:** ● Measures will be put in place to ensure employment is based on merits and to ensure no job applicant is discriminated against on the basis of his or her gender, marital status, nationality, age or religion belief. ● Employment opportunities should first be offered to the local community if the skills are available within the community. SEB will notify the District Office of available employment opportunities. ● Local people living nearby the transmission line route may be hired under mutual contract to trim or cut vegetation along the ROW. Local hiring helps to minimize the need of worker's accommodation. ● Training in health and safety and technical areas will be provided to all personnel. ● SEB shall comply with the labour and occupational health and safety Laws and solely accountable for obtaining residential and work permits, visas and any other clearances (if any) for the Contractor's personnel which are required in accordance with any applicable Laws. **Local Suppliers:** ● Local suppliers to be used where possible. ● The Proponent should develop a database of local companies, especially those that qualify as potential service providers (e.g., construction companies, transportation, security, suppliers).	Before the start of construction and throughout the construction and operation phases.	Visual observation Employment Policy and record Employment record and agreement	Sarawak Labour Ordinance (Act A1237) – Chapter 76, 1952 Immigration Act 1959/1963 (Act 155) Internal reporting Minimum Wage Order 2020

<table>
<tr><th>Impact / Issues</th><th>Phase</th><th>Management Plan</th><th>Timing and Frequency</th><th>Monitoring Indicators</th><th>Reporting Requirement and Applicable Standards</th></tr>
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Information on availability of employment and business opportunities should be disseminated through the longhouse/village headmen and/or the committee.
Proponent will coordinate with local authorities in order to avoid opportunistic, informal markets developing at the perimeters of the construction camps in order to ensure that local settlements at the project area and nearby towns benefiting from workers' spending.

Contract of Service:

All persons employed shall be given a written contract which clearly states the terms and conditions to be agreed upon. Important information such as methods of contract termination and salary must be stated.
If there is an issue of employee misconduct, the case should be dealt with in accordance with proper and impartial disciplinary procedures.

Minimum Wage:
Minimum wage will be paid at the prevailing rate. The minimum wage based on the Minimum Wage Order 2020 rates payable to an employee were:
<table>
<tr><td colspan="5">Minimum wage rate at City Council areas</td></tr>
<tr><td rowspan="3">Monthly</td><td colspan="3">Daily</td><td rowspan="3">Hourly</td></tr>
<tr><td colspan="3">Number of Working Days in a Week</td></tr>
<tr><td>6</td><td>5</td><td>4</td></tr>
<tr><td>RM 1,200</td><td>RM46.15</td><td>RM55.38</td><td>RM69.23</td><td>RM5.77</td></tr>
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<table>
<tr><td colspan="5">Minimum wage rate at Municipal Council areas</td></tr>
<tr><td rowspan="3">Monthly</td><td colspan="3">Daily</td><td rowspan="3">Hourly</td></tr>
<tr><td colspan="3">Number of Working Days in a Week</td></tr>
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</table>

Impact / Issues	Phase	Management Plan	Timing and Frequency	Monitoring Indicators	Reporting Requirement and Applicable Standards
		Working Hour: ● Working hours should not exceed 8 hours a day or not more than 12 a day including overtime. No person is allowed to work more than six days a week in a row without a break. **Working Overtime:** ● Overtime work shall be voluntary except in urgent circumstances such as emergency situations or work which if not carried out will cause injury to any person or severe loss. **Annual Leave**: An employee shall be entitled to paid annual leave of – a. Eight days for every twelve months of continuous service with the same employer if he has been employed by that employer for a period of less than two years. b. Twelve days for every twelve months of continuous service with the same employer if he has been employed by that employer for a period of two years or more but less than five years. Sixteen days for every twelve months of continuous service with the same employer if he has been employed by that employer for a period of five years or more.	Quarterly	Visual observation Employment record and agreement	Sarawak Labour Ordinance (Act A1237) – Chapter 76, 1952
Contractor Facility, Storage Site and Worker Camps	Pre-construction, Construction and Operation	● Include contract provisions to Contractor specifying minimum requirements for construction camps such as set back from nearest settlements, from water bodies, reserved areas etc. ● Ensure that the Contractor prepare Worker Accommodation Plan which should address minimum accommodation standards for the workers (no. persons per room, room size, ventilation etc, no. persons per toilet etc), and set standards for both the main accommodation and temporary accommodation ● Prior to beginning the construction works, the general layout of the site office and onsite base camp at each construction site should be designed to plan to include important structures and provision such as: 1. Clean water supply sources (drinking and washing) and storage tanks or taps. 2. Sanitary facilities and washing areas (at least 30 m from watercourses).	Daily, weekly monthly	Certificate for Accommodation Notice of Occupation	**Part IIIA: Accommodations** Workers' Minimum Standards of Housing and Amenities Act 1990 (Act 446) Guidelines on Temporary Permit Application for Building for Workers' Quarters Within Construction Sites (Ministry of Local Government and Housing Sarawak)

Impact / Issues	Phase	Management Plan	Timing and Frequency	Monitoring Indicators	Reporting Requirement and Applicable Standards
		3. Communal kitchens. 4. Waste handling and disposal facilities. 5. Power supply and genset house. 6. Proper site drainage. 7. First aid kits and vehicles for emergency cases. ● Project site offices and base camps shall be sited far and isolated (at least 500 m) from local communities to minimize worker-local community interactions, which should help reduce social and cultural conflicts, as well as the risk of spread of communicable diseases.			

9.7.7 Waste Management Plan

This Waste Management Plan defines the actions and measures necessary for the overall management of environment and social impacts arising from waste generation, storage and disposal from the project. Project activities during the construction, and operational and maintenance phases have the potential to generate a wide range of waste that require proper planning from the outset to avoid resulting in impacts to human, biological or other environmental receptors.

9.7.7.1 Purpose

The wastes potentially generated by the project requires careful management to avoid negative impacts on human health, regional infrastructure and environmental factors such as groundwater, soils, surface water and ecology. This Waste Management Plan therefore:

- Outlines the key policies, legislation and standards relating to waste management;
- Covers waste handling, segregation storage, transport, re-use/recycling and disposal; and
- Details control measures to be implemented by the Project Proponent and its contractors (and subcontractors), regarding waste management including scheduled waste management.

9.7.7.2 Project Approach to Waste Management

Project activities will result in the generation of a wide range of wastes that require proper planning from the outset to ensure a system of coordinated management between SEB, Contractors, Sub-contractors and relevant local authorities.

Expected sources and types of waste to be generated during the construction, and operational and maintenance phases include:

- Biomass waste from site clearing;
- Solid domestic waste from the workers accommodation camps;
- Construction materials such as wood, metal and paint;
- Packaging waste, including paper, plastic and glass;
- Waste tyres from construction vehicles; and
- Waste oils.

To help manage waste effectively, the project has committed to implement the "hierarchy of waste management" with a focus on waste prevention; and then a decreasing focus on waste reuse; recycling; recovery and elimination, as shown in **Figure 9.7.4**. Only when waste prevention cannot be achieved will the waste be reused, recycled or disposed. Ultimately, residual waste must be disposed of safely and in line with legal requirements.

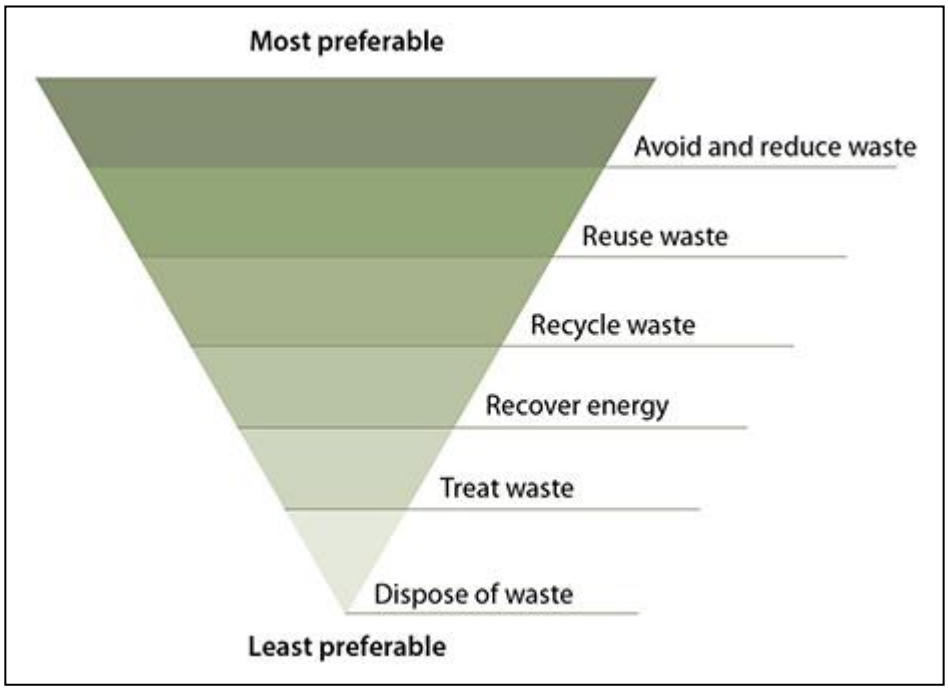

Figure 9.7.4: Waste Hierarchy

In line with the waste management hierarchy, this Waste Management Plan seeks to proactively support a reduction in waste generation as well as increasing resource efficiency. A particular priority is placed on waste streams with high volumes and waste containing hazardous substances (scheduled waste).

9.7.7.3 SEB Roles and Responsibilities

With regards to this Waste Management Plan, SEB is responsible for key management and monitoring activities including:

- Development of bidding conditions regarding waste management.
- Competency training of a SEB Waste Management representative on site.
- Monitoring Contractor performance, supervision and control of Contractors.

Apart from the general roles and responsibilities listed in **Section 9.4**, specific roles and responsibilities within SEB in relation to Waste Management Plan are presented below.

	Key Positions	**Roles and Responsibilities**
1.	General Manager	• Approves the Waste Management Plan.
2.	HSSE Manager	• Ensures the compliance of the project with the requirements set out in this Plan. • Has the general responsibility for the implementation of this Waste Management Plan. • Provides necessary support to the Contractors to enable them to comply with the Waste Management Plan. • Ensures this Waste Management Plan is available to all staff and Contractor staff. • Performs regular audits of the main Contractor's performance against the requirements of this Plan. • Reports all risks, non-compliances with this Plan and incidents. • Prepares an annual environmental report that includes waste management details.
3.	HSSE Officer	The HSSE Officer will verify the implementation of Contractor's obligations, including regular audits of: • Registration of the waste generated. • Checking the waste deposit areas. • Visual inspections of soil and water in the work area. • Whether the required waste authorizations are held by the contractors and their partners. • Whether Contractor has appropriate emergency response plan in the event of accidents.

9.7.7.4 Management System Verification Monitoring

The proposed monitoring plans should meet both the Proponent's requirement to understand and manage the project's potential impacts during each construction activity/location and any specific environmental requirements. Management system verification monitoring is as shown in **Table 9.7.9**.

Table 9.7.9: Auditing Waste Management System

Tier	Objective	Responsible	Description	Frequency
Tier 1	Waste Management Plan audits	Proponent	These audits are undertaken by the Proponent's HSSE team to confirm compliance by the company and its contractors with this Waste Management Plan.	Semi-annual

9.7.8 Supply Chain Management Plan

Sarawak Energy will be awarding qualified Contractors to build, install and commission this transmission line project. It is recommended that the submission of Contractor's Supply Chain Management Plan be made a requirement in the project's tender or bid package. This Plan should define the Contractor's approach to supply chain management including environmental, social and quality considerations, maximise the supply and/or purchase of local goods and services, and address the following:

- Procurement and supply standards
- Local content policy for local business and community development
- Third-party vendors of services, materials and products
- Third-party aggregate and sand suppliers
- Workers' rights compliance.

In addition, SEB will make it a mandatory requirement for the Contractor to identify the Project's primary supplier - in this case: Steel and Electrical Cable. The Contractor will be required to conduct an environmental and social audit of the proposed primary supplier's fabrication facility and operation prior to the actual supply of the material. The audit shall include sustainability criteria such as social, environmental, ethics, human rights, health and safety performance, and preference and support to local suppliers.

9.8 CONTRACTOR ESMPs

9.8.1 Erosion and Sediment Control Plan (ESCP)

This section covers the details of the temporary measures that will be implemented during the site preparation, earthwork and construction phases, to control the environmental impacts of erosion and sedimentation.

The ESCP's main objectives are to minimise and control the environmental impacts of erosion and sedimentation, to protect the environmental quality at the project site and its surrounding areas, through systematic planning, implementation, monitoring and auditing of the proposed mitigation measures on-site. It will be the responsibility of the to-be-appointed Contractor to fully implement the proposed ESCP BMPs, during the clearing, earthwork and construction stages.

Details on the design references, principles, soil loss estimation, yield estimation, objectives are appended in **Appendix 8.3.1**. The proposed ESCP BMPs at each and every transmission tower site shall be implemented by the to-be-appointed Contractor.

Table 9.8.1: ESMP – Erosion and Sediment Control Plan and Best Management Practices (BMPs)

Impact / Issues	Phase	Management Plan	Timing and Frequency	Monitoring Indicators	Reporting Requirement and Applicable Standards
Scheduling	Pre-Construction	• The Contractor shall prepare a dedicated ESCP for their work Package for SEB's review and endorsement prior to start of construction work at site. The ESCP shall be prepared by a competent person e.g., Certified Professional in Erosion and Sediment Control (CPESC). • The scheduling of construction should consider the rainy seasons and should minimise the length of time the soil is left exposed, and to reduce the total area of exposed soil during the rainy seasons. • Plan so that critical areas (such as highly erodible soils, areas adjacent to waterways, etc.) are not disturbed until the non-rainy season, and so the entire area that is disturbed at any one time, is kept to a size that can be managed effectively. • Identify vegetative buffer zones between the sites and sensitives areas, e.g., wetlands, and other areas to be preserved, especially in perimeter areas. • Hold a pre-construction meeting to discuss the specific erosion and sediment control measures and construction limits.	Before the start of construction	Visual verification at site or location of project activities Minute of Meeting	Inspection log book Monthly HSSE Report Urban Stormwater Management Manual for Malaysia, MSMA 2nd Edition, Year 2012 by Department of Irrigation and Drainage Malaysia. Guideline for Erosion & Sediment Control in Malaysia, October 2010 by Ministry of Natural Resources and Environment, Malaysia and Department of Irrigation and Drainage Malaysia.
Site Access Areas (construction entrances)	Pre-Construction	• Stabilise site entrances and access roads prior to commencement of construction activities.		Visual verification at site or location of project activities Photograph record	
Runoff Control	Pre-Construction	• Stabilise streambanks and construct the primary runoff control measures to protect areas from concentrated flows. • Follow the mitigation measures proposed in **Section 8.3.2.2** (**Chapter 8**).			
Diversion Channel / Earth Drain	Pre-Construction	• Diversion channels should be installed when the site is initially graded and remain in place until permanent BMPs are installed and/or slopes are stabilised. • Berm drain and cascading drain shall be provided at the cascade terracing area to divert and slow down surface runoff as well as to protect slope from fast surface runoff. • Follow the mitigation measures proposed in **Section 8.3.2.2** (**Chapter 8**).			
Sediment Fence	Pre-Construction	• Install temporary sediment fence to acts as a linear barrier creating upstream ponding that allows soil particles to settle out, thereby reducing			

Impact / Issues	Phase	Management Plan	Timing and Frequency	Monitoring Indicators	Reporting Requirement and Applicable Standards
		the amount of soil leaving a disturbed area. Refer to **Annex C of Appendix 8.3.1a.** ● Follow the mitigation measures proposed in **Section 8.3.2.2** (**Chapter 8**).			
Rock Filter Check Dam	Pre-Construction	● Install temporary rock filter check dam across a diversion channel or swale to reduce the velocity of concentrated stormwater flows, thereby reducing erosion and promote sedimentation behind the dam – refer to **Appendix 8.3.1b**. ● Follow the mitigation measures proposed in **Section 8.3.2.2** (**Chapter 8**).			
ESC for ROW Clearing, Transmission Line and Tower Sites	Construction	● Chainage for the ROW shall be 50 m for the width from Mapai substation to Baleh substation of about 176 km in length. ● Prior to beginning the removal of vegetation, the limits of clearing will be established and identified in accordance with the drawings. All clearing shall be confined to within the ROW as shown in the drawings. ● Prior to any commencement of work, construction entrance stabilisation (CES) shall be constructed at the entrance/exit point to the public sealed road (if any), to minimise the impact of sediment being washed onto the public road and existing drain, as well as to act as a dust control measure. ● Follow biomass management proposed in **Section 9.7.7**. ● Follow the mitigation measures proposed in **Section 8.3.2.2** (**Chapter 8**). ● The ESCP for the transmission towers can be referred in **Appendix 8.3.1a**. ● Details of the BMPs can be referred in **Appendix 8.3.1b**.	Weekly site inspection and continuous during construction	Visual verification at site or location of project activities Photograph record	Inspection Log Book Monthly HSSE Report
ESC at Waterway Crossings for Transmission Line and Towers	Construction	● For river crossings, there would be no major impact of soil erosion and sedimentation to the rivers as there are no major earthwork activities within the river reserve.	-	-	-
ESC at Road Crossings for Transmission Line and Towers	Construction	● For road crossings, there would be no major impact of soil erosion and sedimentation to the roads as there are no major earthwork activities within the road reserve.	-	-	-

Impact / Issues	Phase	Management Plan	Timing and Frequency	Monitoring Indicators	Reporting Requirement and Applicable Standards
Overall Erosion and Sediment Control	Construction	• ESCP is COMPULSORY to be followed accordingly and maintained by a qualified person to ensure that only the allowable quality and quantity of water to be discharged out from the project site. • All contractors shall be informed of their responsibilities in minimising the risk of soil erosion and pollution, resulting from the earthwork and construction activities. • A temporary access road may be left open temporarily to allow access by construction traffic to enable the temporary BMPs to be installed, regularly inspected and maintained. When the temporary access is no longer required, it must be stabilised. • After the site is stabilised, remove all temporary BMPs and install permanent vegetation on the disturbed areas. • Follow the mitigation measures proposed in **Section 8.3.2.2** (**Chapter 8**) • The ESCP for the transmission towers can be referred in **Appendix 8.3.1a.** • Details of the BMPs can be referred in **Appendix 8.3.1b.**	Weekly site inspection and continuous during construction	Visual verification at site or location of project activities A record of all environmental and social awareness training undertaken as part of the ESCP and BMPs Photograph record	Inspection Log Book Monthly HSSE Report
Inspection and Maintenance Programme	Pre-Construction	• Appoint an on-site Environmental Officer (EO) to oversee the execution of ESCP mitigation measures and its BMPs effectiveness. • Due to the project site spanning over a stretch of 177 km, it is encouraged to have each active area to appoint its individual environmental inspector to conduct routine end-of-day maintenance check and keeping records.	Daily After storm event	Prior to the start of site activities	Inspection Log Book Monthly HSSE Report
Water Quality Monitoring	Construction	• Water quality will be monitored regularly. • Water quality monitoring location shall be proposed at the selected river and streams near work sites. • The parameter to be monitored is Total Suspended Solids (TSS).	Monthly	Visual verification at site or location of project activities Photograph record See **Table 9.9.2** for proposed monitoring details	Inspection Log Book Monthly HSSE Report Water testing report by accredited laboratory

Impact / Issues	Phase	Management Plan	Timing and Frequency	Monitoring Indicators	Reporting Requirement and Applicable Standards
Site Inspection	Construction	● A self-auditing programme will be established based on an inspection checklist. This is to ensure that: ► The ESCP is being implemented properly. ► Repairs for the Best Management Practices (BMPs) are undertaken as required. ► Essential modifications are made to the ESCP, if and when necessary.	At least daily, weekly, bi-weekly or monthly; and immediately after a storm event.	Visual verification at site or location of project activities Parameters for checking includes compliance with drawing, standard and specification, the construction material, physical condition of the BMPs, presence of waste, and inspection of discharge outlet Photographs records with date to show construction progress	Inspection Log Book Monthly HSSE Report
Maintenance of BMPs	Construction	1. Construction Entrance Stabilisation.	Monthly / Quarterly After storm event	Visual inspection at site or location of BMPs Photograph record	Inspection Log Book Monthly HSSE Report
		2. Temporary Waterway Crossing (if any): ● Periodically remove silt from crossings. ● Replace lost aggregate from inlets and outlets of culverts.	Weekly/ by-weekly After storm event		Inspection Log Book Monthly HSSE Report
		3. Drainage: ● Ensure no siltation or blockage in the drainage system. ● Maintain until the area served by the temporary drain is fully stabilized.	Weekly/ by-weekly After storm event		Inspection Log Book Monthly HSSE Report
		4. Rock Filter Check Dam: ● Replace lost aggregate when necessary. ● Remove accumulated sediment once sediment reaches 1/3 of the check dam's height.	Weekly/ by-weekly After storm event		Inspection Log Book Monthly HSSE Report

Impact / Issues	Phase	Management Plan	Timing and Frequency	Monitoring Indicators	Reporting Requirement and Applicable Standards
		● Maintain until area served by the Check Dam is stabilized.			
		5. Silt Fence: ● Replace damaged fence whenever necessary. ● Periodically remove the sediment accumulated behind the fence. ● Maintain until area served by the sediment fence is filly stabilized.	Weekly After storm event		Inspection Log Book Monthly HSSE Report
		6. Slope Protection: ● Turf the slope if there is no further work to be carried out.	Weekly After storm event		Inspection Log Book Monthly HSSE Report
Keeping of Log Book	Construction and Operation	Logbook shall always be kept on-site for inspection by DID, DOE or local authority officers with entries made at least weekly on: ● Dates of installation and removal of BMPs. ● Repair of any damage to BMPs. ● Rainfall depths, duration and times. ● Condition of BMPs, structures and stabilised surfaces. ● Water quality monitoring report (e.g., TSS).	Weekly update	Logbook is available for inspection when required	Inspection Log Book Monthly HSSE Report

9.8.2 Waste Management Plan

This Waste Management Plan covers all activities involving waste generation or management throughout the project Construction phase, and Operational and Maintenance phase, and is applicable to all appointed contractors and sub-contractors.

The Contractors should comply with waste management hierarchy as shown in **Figure 9.7.4**, and should demonstrate that they are actively seeking to promote waste prevention and/or its reuse, and that particular attention will be paid to the management of scheduled waste.

The types of project waste that must be segregated and the volumes generated recorded are:

- Non-hazardous waste: construction material (including concrete), welding waste, metal waste, wood waste, biomass waste, packaging, paper, domestic.
- Scheduled waste: contaminated textile waste (used PPE), contaminated packaging, spent oil, paint.

9.8.2.1 Legislation and Standards

9.8.2.1.1 Municipal Solid Waste (MSW)

Municipal solid waste is the collective term for household, industrial and commercial solid wastes with the exclusion of scheduled wastes. In Sarawak, municipal solid waste is under the responsibility of the local authorities under the Local Authority (Cleanliness) By-Laws 1999. Under the By-Law, local authorities have the responsibility to determine or establish or maintain a system for the collection, removal and disposal of wastes from all premises within its area of jurisdiction. The By-Laws also require local authorities to supply to the owner or occupier of any premises therein adequate bins at a cost.

9.8.2.1.2 Scheduled Wastes

Scheduled waste is any wastes that possess hazardous characteristics and have the potential to adversely affect the health of the public and environment. There are 77 types of scheduled wastes listed under the First Schedule of the Environmental Quality (Scheduled Wastes) Regulations 2005. The regulation requires hazardous wastes to be properly packaged, labelled and stored.

The DOE has also issued the "Guidelines for Packaging, Labelling and Storage of Scheduled Wastes in Malaysia". The guideline specifies the requirements for site selection and design criteria for storage of scheduled wastes, packaging, labelling and management of containers containing scheduled wastes.

9.8.2.2 Contractor Roles and Responsibilities

Apart from the general roles and responsibilities listed in **Section 9.4**, the Contractor's specific roles and responsibilities within SEB in relation to Waste Management Plan in the table below.

	Key Positions	**Roles and Responsibilities**
1.	Contractors and Sub Contractor Personnel	The Contractor must implement all relevant requirements of the ESIA and this Waste Management Plan. Contractors are also responsible for ensuring that any subcontracted work meets these requirements. Contractors will therefore be required to present to the SEB their proposed approaches to: ● Identification and quantification of the different types of waste produced on site. ● Collection of recyclable wastes and scheduled wastes, their collection and storage arrangements within the project site. ● Waste transport (own resources or through outsourcing). ● Reusable waste recovery. ● Treatment and disposal of scheduled waste by presenting pre-contracts/contracts with DOE licensed companies. Further specific responsibilities of the Contract/sub-contractors are outlined below.
2.	Contractor's HSSE Manager	● Ensures all activities are performed according to the requirements of this Waste Management Plan. ● Performs regular inspections at the working sites to ensure all activities are being performed according to the requirements of the Waste Management Plan. ● Assign a person responsible for waste management. ● Keeps all necessary records and reports on waste according to the requirements of relevant legislation.

	Key Positions	Roles and Responsibilities
		• Ensures all staff receive the necessary training in relation to waste management, including scheduled waste. • Ensures contracts are in place with DOE licensed transporter for the collection, recovery or disposal of all scheduled wastes. • Ensures all subcontractor activities are conducted in line with this Waste Management Plan. • Produces quarterly and an annual environmental report that include details on waste management that must be submitted to SEB. • Reports on all non-compliances with this Plan. • Ensures all necessary measures are taken to remedy any non-compliances.

9.8.2.3 Mitigation Measures and Management Actions

The objectives and targets of the WMP are as follow:

Objective	• To reduce the amount of waste generated by the project through implementing the waste management hierarchy (avoidance, reuse, recycling, and waste disposal). • To maximise the amount of material which is sent for reuse, recycling or reprocessing. • To manage and mitigate any potential impacts of hazardous substances on soils, waterways and other components of the environment. • To minimise the amount of material disposed to municipal dumpsites.
Target	• No open burning of wastes. • Use of biomass removed from the ROW, e.g., as cut timber, poles etc. for use by local communities as far as possible • Reuse of excavated material (spoils) as aggregates for concrete and road fill. • Minimal impact to the surrounding environment by wastes generated from the project. • Training in environmental incident and spill response provided to all relevant site-based project personnel. • Prevention of reoccurrences of incidents by appropriately implementing corrective and preventative actions and planning. • Zero number of reported non-compliances with the requirements of this Waste Management Plan.

The following **Table 9.8.2** details the Waste Management Plan for the BMTLP.

Table 9.8.2: Waste Management Plan

Impact / Issues	Phase	Management Plan	Timing and Frequency	Monitoring Indicators	Reporting Requirement and Applicable Standards
Biomass / Earth Waste	Pre-Construction	• Make reference to mitigation measures recommended in **Chapter 8, Section 8.3.6**. • Adhere to the Procedures and Guidelines for Vegetation Management Version 1.0 September 2019 issued by SEB. • Limit clearing to the minimum areas required to accommodate the project footprint. • Retain existing vegetation where practicably possible. • Identify appropriate areas which could be used for the disposal of excess soils, outside of any riparian buffer zones. • Design roads to balance earthwork quantities where feasible, thereby minimising the use of borrow pits and soil dumps. • Clearly communicate to all staff (contractors and employees) vegetation clearance boundaries and protocols to be implemented to ensure clearing and earthworks contractors avoid impacts on buffer zones and other areas not designated for clearing.	Weekly site inspection and continuous during construction	Boundary tags are in place. Record number of hectares cleared. Visually monitor waterways and drainage lines to ensure no indiscriminate disposal of biomass wastes. Visually monitor riparian buffer zones.	Monthly HSSE Report Quarterly Environmental Monitoring Report
Vegetative Waste	Construction	• Make reference to mitigation measures recommended in **Chapter 8, Section 8.3.6**. • Ensure that the boundaries of areas to be cleared are physically demarcated prior to commencement. • Only clear the area within the designated ROW. • For the purpose of providing benefits to local communities, it is recommended the communities are actively involved in clearing works and that they get access to utilise any biomass that otherwise would be wasted. • The biomass should be stored at a designated area where the local community can access it easily. • Appropriately store any biomass not taken by the local community (at least 5 m away from any watercourse) or immediately mulched for fast decomposition or for later use within site. • If burning is deemed necessary for access or other reasons and permitted, debris may be stacked or windrowed before the burn. Open burning of biomass waste is only permitted with written permission from NREB.			

Impact / Issues	Phase	Management Plan	Timing and Frequency	Monitoring Indicators	Reporting Requirement and Applicable Standards
		● Disposal to other location outside the project site should be with approval from the relevant local authority. ● Ensure that removed topsoil is stockpiled for later use. ● Excavated soil should be reused to fill the foundations of the tower footing to stabilize it. ● Do not push stripped soil and cleared vegetation into watercourses, surface water drainage lines or standing vegetation.			
Municipal Solid Wastes	Construction	**General:** ● Make reference to mitigation measures recommended in **Chapter 8, Section 8.3.6**. ● Instruct site personnel in the recognition, handling and the appropriate and safe disposal of wastes at project sites/areas. ● Minimise waste through efficient use of resources. ● Maximise reuse and recycling opportunities. ● Minimise volumes of waste disposed to dumpsite/landfill (by prioritising waste reduction, reuse and/or recycling). ● Segregate wastes at the source. ● Ensure handling, storage and disposal practices meet environment permit requirements. ● Prohibit littering, disciplinary action for employees found to commit littering ● Promote continual improvement in areas such as material handling and waste management training. ● It will be the contractor's responsibility to remove from site all relevant waste. ● A waste register that records all incoming and outgoing waste must be implemented and maintained. The register must as a minimum include waste type, volume, name of the waste producer, nominated disposal/treatment/storage facility. ● Waste management practices must be regularly audited. ● Waste storage facilities must be regularly inspected. ● Maintain good housekeeping within the base camps and the overall cleanliness of construction site.	Weekly site inspection and continuous during construction	Visual verification at site or location of project activities. Maintain records of waste disposal to landfill. Maintain records of waste disposal to recycling facility. Undertake reconciliation of quantities of material ordered versus quantities used. Audit waste storage facilities and waste management practices.	Monthly HSSE Report Quarterly Environmental Monitoring Report

Impact / Issues	Phase	Management Plan	Timing and Frequency	Monitoring Indicators	Reporting Requirement and Applicable Standards
		● Conduct a major clean up to clear the construction site of all construction wastes and temporary structures at the end of all construction works. ● Prohibit open burning of solid wastes.			
		Putrescibles/ Biodegradable Solids: ● Collect putrescible and biodegradable litter in lidded containers located at designated points at the project site, and recycle as stockfeed or compost it for distribution to farmers/growers. Alternatively, dispose of it at local authority approved landfill. .			
		Recyclable Waste: ● Minimise waste generation by minimising over-ordering of goods. Where possible, goods will be purchased in bulk to reduce packaging and suppliers will collect their own packaging after use. ● Where recycling facilities are available, commonly-generated recyclable waste materials (e.g., glass, paper, aluminium cans) will be collected in clearly-signed lidded containers located at designated points within the project site. Other recyclable wastes such as scrap metal and wood cartons should also be placed in appropriate designated locations at the project site before collection and transport offsite to appropriate recycling facilities. ● Refer to the details in Chapter 5 on recycling services.			
		Non-Recyclable Waste: ● Waste material will be collected in clearly-signed lidded containers located at designated points around the project area (e.g., general litter, plastic wrapping, small inert products) before collection and disposal at landfill. ● Plastic drums containing non-hydrocarbon/non-hazardous substances will be rinsed and cleaned. If not recyclable, the drums should be crushed and disposed of at landfill.			

Impact / Issues	Phase	Management Plan	Timing and Frequency	Monitoring Indicators	Reporting Requirement and Applicable Standards
Chemical, Petroleum and Scheduled Waste Management	Construction	**General:** ● Make reference to mitigation measures recommended in **Chapter 8, Section 8.3.6**. ● Design and plan hydrocarbon, chemical and scheduled waste management, containment and removal prior to project implementation. ● Include conditions for the use of hazardous substances in all contractor contracts. ● Minimise use of hazardous substances and select alternatives where possible. ● Maintain an up-to-date inventory of hazardous substances detailing the volume, type and location of each hazardous substance. ● Segregate waste at the source. ● Ensure handling, storage and disposal practices meet the requirements under the Environmental Quality (Scheduled Waste) Regulations, 2005. ● Conduct inductions and training for project staff and contractors concerning appropriate safe and environmentally sound handling, storage, transport and disposal of scheduled wastes and chemicals. ● Promote continual improvement in areas such as material handling and waste management training. ● It will be the contractor's responsibility to remove all scheduled wastes from site. **Storage of Fuels and Oils:** ● Fuel and oil storage should be sited at least 50 m from any office, living quarters or watercourse. ● Ensure storage is not located at areas that has the potential to be flooded or close to the edge of hill or slopes. ● Bund to a volume of 110% of the largest container of stored fuel. ● Ensure that a spill response kit is available to clean up spills. ● Ensure that adequate fire extinguishers are available. ● Ensure that storage containers are appropriate, safe and secure, appropriately labelled and routinely inspected for leaks.	Weekly site inspection and continuous during construction.	Maintain an up-to-date inventory of scheduled wastes as stipulated under Regulation 11 of the Environmental Quality (Scheduled Wastes) Regulations 2005. Maintain records of scheduled wastes disposal to DOE approved treatment facilities. Undertake reconciliation of quantities of material ordered versus quantities used. Inspect stored containers and keep in a log book for reference. Maintain safety data sheets (SDS) records Maintain personnel training records	Monthly HSSE Report Quarterly Environmental Monitoring Report Environmental Quality (Scheduled Wastes) Regulations 2005

Impact / Issues	Phase	Management Plan	Timing and Frequency	Monitoring Indicators	Reporting Requirement and Applicable Standards
		● Site field fuel tanks, re-fuelling points and maintenance areas at least 50 m from any waterbody and outside of riparian buffer zones. ● Construct workshop floor from impermeable material.			
		Use of Hydrocarbon Products: ● Refuel and service vehicles and equipment in a designated bunded area close to the fuel storage area. Check fuel hoses for splits/excessive wear, ensuring supervision at all times during refuelling, placing drip trays under refuelling points and minimising the distance from the fuel storage to the vehicle. ● Undertake all unloading, loading or handling of fuels away from drainage lines. ● Remove all soil contaminated by fuels or oil spills and dispose as scheduled wastes. ● Properly stockpile empty fuel and oil drums (lids firmly secured) to eliminate spillage of residual oils and fuels. ● Periodically remove all empty drums and containers from site for appropriate disposal at DOE licensed premise or recycling, if possible. ● Report all spills.			
		Use and Management of Chemicals: ● Maintain the number and range of chemicals and fuels used on site to a minimum. ● Ensure that safety data sheets (SDS) are available for all chemicals used on site. ● Use, store and transport chemicals in accordance with the relevant SDS and ensure that all chemicals are: ► Clearly labelled and held in appropriate storage containers; ► Stored within the manufacturers recommended temperature range for safe storage; ► Stored away from accommodate areas; and ► Appropriately segregated. ● Ensure that all staff and field personnel are aware of the potential hazards involved with the handling of chemicals and use appropriate personal			

Impact / Issues	Phase	Management Plan	Timing and Frequency	Monitoring Indicators	Reporting Requirement and Applicable Standards
		protective equipment (PPE), and that clean up procedures in the event of a spill are clearly understood. ● Develop an Emergency Response Plan (ERP) that will include a Spill Response Plan for hazardous substances and scheduled wastes, and provide for appropriate spills containment training of staff as part of the induction process.			
		Management of Scheduled Wastes: ● Storage duration of scheduled wastes should not be more than 180 days or the quantity of scheduled wastes accumulated on the site should not exceed 20 metric tonnes unless approved by the Director General of the Department of Environment. ● The storage area must be fenced-in and regarded as restricted area with adequate signage of "Danger" and "Scheduled Wastes Storage". ● The floor of the storage area and loading and unloading area must be covered with concrete or any suitable lining material, free of cracks and gaps. ● The storage area should be sheltered or roofed to prevent rainwater or surface water from entering the storage area. ● Bunding of the storage area should be 110% of the largest container stored in the storage area. ● Separate compartments should be provided for different groups of incompatible wastes. ● Storage area should be equipped with firefighting and other emergency response equipment as well as spill kit. ● The container used should be in good condition (free from any damage such as tear or hole). ● Containers of scheduled wastes shall be clearly labelled in accordance with the Third Schedule of the Environmental Quality (Scheduled Wastes) Regulations 2005 and marked with the scheduled wastes code as specified in the First Schedule of the Environmental Quality (Scheduled Wastes) Regulations, 2005. ● Inventory record for each scheduled waste should be maintained to indicate the date, type and quantity of wastes brought into or removed from the project site.	Weekly site inspection and continuous during construction.		

Impact / Issues	Phase	Management Plan	Timing and Frequency	Monitoring Indicators	Reporting Requirement and Applicable Standards
		● Train all employees involved in the identification, handling, labelling, transportation, storage and emergency response team on the spillage or leakage of scheduled waste on the proper management of scheduled wastes as stipulated under Regulation 15 of the Environmental Quality (Scheduled Wastes) Regulations 2005. ● Provide all wastes handlers with suitable personal protection equipment (PPE) in carrying out their duties.			
Sewage (Effluent)	Construction	● Make reference to mitigation measures recommended in **Chapter 8, Section 8.3.3**. ● Direct discharge of raw sewage into waterways is strictly prohibited. ● Adequate toilets equipped with septic tanks or mobile toilets should be provided to treat sewage to the requirement of Standard B of the Environmental Quality (Sewage) Regulations, 2009 prior to discharge. ● Design and sizing of septic tanks to be installed shall be in accordance with the "Sarawak Urban Sewerage System Guidelines No. 1: The Design and Construction of Septic Tanks" issued by Sewerage Service Department Sarawak ● The septic tanks should be desludged on a regular basis to ensure effective operation. ● Toilets should be located at least 100 m from surface water bodies and away from areas of high-water table. ● Water quality (FCC and TCC) will be monitored regularly.	Weekly site inspection and continuous during construction	Visually monitor discharge points for any algae growth. Maintain records of number of septic tanks onsite. Maintain desludging records. See **Table 9.9.2** for proposed monitoring details.	Monthly HSSE Report Quarterly Environmental Monitoring Report Quality (Sewage) Regulations, 2009
Vegetative Wastes - Maintenance of Clearing During Operation and Maintenance	Operation and maintenance stage	● Make reference to mitigation measures recommended in **Chapter 8, Section 8.3.6**. ● Existing access routes and disturbed areas should be utilised as far as possible to access transmission line route. ● Vegetation clearing must be kept to the absolute minimum servitude required for safe operation of the transmission line. ● Felled biomass shall either: ► Be cut to facilitate soil contact and fast, natural decomposition; ► Be windrowed at the edge of the ROW; or ► Be removed to use/disposal outside the ROW.	Weekly site inspection and continuous during construction	Visually monitor waterways and drainage lines to ensure no indiscriminate disposal of biomass wastes. Visually monitor riparian buffer zones.	Monthly HSSE Report

Impact / Issues	Phase	Management Plan	Timing and Frequency	Monitoring Indicators	Reporting Requirement and Applicable Standards
		● For the purpose of providing benefits to local communities, it is recommended the communities are actively involved in ROW clearing works and that they get access to utilise any biomass that otherwise would be wasted.			
Solid Wastes	Operation and maintenance	● Make reference to mitigation measures recommended in **Chapter 8, Section 8.3.6**. ● Minimal waste will be produced during the operation of the transmission line. However, any solid waste produced during maintenance operations must be disposed of at an approved landfill or recycle if recyclable.	Weekly site inspection and continuous during construction	Visual verification at site or location of project activities. Maintain records of waste disposal to landfill. Maintain records of waste disposal to recycling facility. Undertake reconciliation of quantities of material ordered versus quantities used. Audit waste storage facilities and waste management practices.	Monthly HSSE Report Quarterly Environmental Monitoring Report
Hazardous Wastes	Operation and maintenance	● Make reference to mitigation measures recommended in **Chapter 8, Section 8.3.6**. ● During maintenance, should any oil spills or leaks occur from maintenance vehicles, the contaminated soil must be removed, remediated or transported to DOE approved treatment facilities. ● Ensure that no waste material is left behind on site. ● Management of wastes from maintenance activities (waste metals, cables, oils etc) to be managed as stipulated for hazardous and non-hazardous wastes during construction above.	● Weekly site inspection and continuous during construction.	● Maintain an up-to-date inventory of scheduled wastes as stipulated under Regulation 11 of the Environmental Quality (Scheduled	● Monthly HSSE Report ● Quarterly Environmental Monitoring Report ● Environmental Quality (Scheduled Wastes) Regulations 2005

Impact / Issues	Phase	Management Plan	Timing and Frequency	Monitoring Indicators	Reporting Requirement and Applicable Standards
		● All waste generated through any process related to the application of herbicides, including left-over herbicide mix that will not be used later and empty herbicide containers, shall be treated as hazardous waste. ● Store herbicides in their original containers where possible. ● Label storage containers for herbicides according to its content and safety, health and environmental hazards. ● Store herbicides in accordance with the MSDS and/or label of the herbicide in question. ● Store herbicides in a cool, dry area where food and drinks are never stored or prepared. ● Line storage area for herbicides with plastic or impermeable material to prevent leaks from reaching the soil. ● No herbicide shall be stored on site for a period exceeding the expiry date of the product. ● Properly train staff on how to respond to accidental spillages of herbicides.		Wastes) Regulations 2005. ● Maintain records of scheduled wastes disposal to DOE approved treatment facilities. ● Undertake reconciliation of quantities of material ordered versus quantities used. ● Inspect stored containers and keep in a log book for reference. ● Maintain safety data sheets (SDS) records ● Maintain personnel training records	

9.8.2.4 Management System Verification Monitoring

The management system verification monitoring for the contractor will be Tier 2 as shown in **Table 9.8.3**.

Table 9.8.3: Contractor Auditing Waste Management System

Tier	Objective	Responsible	Description	Frequency
Tier 2	Contractor self-audits	Contractor	These audits are to be undertaken by contractors to confirm compliance by themselves and their subcontractors with the Waste Management Plan and their own HSSE management systems. The managing contractors shall ensure that audit reports are provided to the Proponent.	Quarterly

In addition to the above, weekly inspections and compliance monitoring visits are also expected. The weekly inspections have been described in **Table 9.8.2** and the monitoring requirements are shown in **Table 9.9.2**.

9.8.3 Biodiversity Management Plan

The Project Proponent already has a standardised policy for ROW management and biodiversity, which accumulates several years of experience throughout Sarawak. This, together with additional environmental approval conditions shall be inserted into all contracts for field implementation by the Contractors. This will not relieve the Project Proponent of any responsibility but will ensure the policies are implemented throughout the establishment and maintenance of the transmission line.

9.8.3.1 Vegetation

Most, if not all vegetation within the ROW and along the access roads will be completely removed during land clearing and later maintenance operations. During stringing it will be necessary to have a clear easement so the conductors can be brought in and strung on the towers. There are no options for managing the vegetative biodiversity other than minimising clearing, i.e., accepting bush cover, during operation. This may connect the forest areas for pollinators and some seed dispersal by animals, who may move under the protection of the bushes.

Considering the area is mostly modified habitats, off-set planting for floral diversity reasons is not a realistic option.

What must be done, however, is prevention of unnecessary damage to surrounding areas, particularly in critical areas such as riverine vegetation. Clearing operations shall avoid felling of tall trees into neighbouring areas, where they may damage canopies and stems (the bark) when falling. All felling must be within the ROW after which debris, to the extent it cannot be contained within the ROW, may be pushed to the side in a manner that does not harm neither stems nor roots of standing trees. The management plan for vegetation and biomass wastes is addressed in **Section 9.8.2** (refer to **Table 9.8.2**).

When entering areas outside the ROW to cut down 'danger trees[3]' care shall be taken to avoid damage to residual vegetation. This may require directional felling and winching. If stems shall be removed from the felling site to the right-of-way for decomposing or other use, they shall be winched out as tractors shall not enter areas outside the right-of-way. Canopies from felled trees shall be shredded so all wooden debris is in close contact with the soil.

[3] Trees outside the ROW, which, if falling may pose a risk to the transmission line.

Some protected species, notably Tapang *(Koompasia excelsa*), Ensuraii (*Dipterocarpus Longifolius*), Engkabang (Shorea macrophylla) and pitcher plants (Nepenthes spp) may have to be removed during clearing of the ROW. There is no mitigation or remedial action to be recommended except local communities may request traditional acts of respect to be observed if e.g., Tapang trees are to be felled. These trees represent high spiritual values to the communities, who consider it taboo to fell them.

9.8.3.2 Fauna

The current study provided a snapshot of the habitat condition and species of terrestrial fauna in a particular time and location. The time and resources available for the current study does not permit a thorough investigation into the composition of all fauna groups and their behaviour.

Recommendation for future study include sampling more sites, employ other survey methods such as camera traps, bat detectors, mist nets and cage traps. Such study should include sites that are affected by the ROW in order to determine whether species are coming back and what species use the project site during operation. For camera traps to be effective, many infra-red triggered cameras have to be used and placed near well used animal trails for longer periods, normally several weeks to a few months depending on battery life and capacity of SD cards used on the camera. Researchers have also used lures to attract animals to the traps.

It should include more interviews with hunters rather than just a person from a particular longhouse. Hunters tend to have greater knowledge of animal ecology, behaviour and habitat requirement which they gained from experience and from previous generation of hunters. It is important to build a rapport them because hunters are always suspicious that they may be found guilty of hunting animals that are protected or hunting animals for sale.

The following measures aim to minimize project impacts on rare, endangered or threatened species (if any) and for overall habitat management. The proposed future study and monitoring for fauna is listed in **Table 9.9.2**.

Table 9.8.4: ESMP – Biodiversity Management Plan

Impact / Issues	Phase	Management Plan	Timing and Frequency	Monitoring Indicators	Reporting Requirement and Applicable Standards
Flora	Pre-Construction	● Make reference to SEB's Biodiversity Management Plan for Baleh HEP. ● The measures outlined under Procedures and Guidelines for Vegetation Management Version 1.0 September 2019 issued by SEB will be implemented. ● A habitat/ flora assessment will be undertaken within the transmission line ROW and proposed access roads to identify areas of natural habitat and locations of threatened flora species, if any.	Once before construction	Record number of hectares cleared Record of any protected plants cleared Visually monitor riparian buffer zones Photograph record	Monthly HSSE Report Sarawak Biodiversity Regulations 2015 Forest Ordinance 2015 Forest Rules 1973 Wild Life Protection Ordinance 1998 Wild Life Protection Rules 1998 IUCN 2021 WLPO 1998
	Construction	● Demarcate area to be cleared before commencement of clearing works. ● Clearing activities should, to the extent technically feasible, avoid or restrict clearing of gullies, steep slopes, and riparian crossings. Vegetation removal within 10m of watercourse banks will be undertaken by hand to avoid the use of machinery in riparian areas. ● Felling shall be directional to avoid damage to standing vegetation outside the ROW. ● Felling shall be done with hand-held tools/equipment. Use of excavators or other machinery that rips trees out of the ground shall not be permitted. ● Fell trees, vegetation cuttings, and debris shall be kept out of rivers, waterways, and water bodies. ● Retain groundcover vegetation if possible. ● Clearly communicate to all staff (contractors and employees) vegetation clearance boundaries and protocols to be implemented to ensure clearing and earthworks contractors avoid impacts on buffer zones and other areas not designated for clearing.	Daily during construction activities	Record number of hectares cleared Record of any protected plants cleared Visually monitor riparian buffer zones Photograph record	
	Operation and Maintenance	● Keeping a cleared ROW at major riparian crossings should be avoided and low, natural vegetation shall be given the opportunity to re-establish itself after the possible damage during construction/stringing. ● Tree height must be maintained well under the transmission line by manually cutting or trimming them.	Monthly	Record number of hectares cleared Record of any protected plants cleared	

Impact / Issues	Phase	Management Plan	Timing and Frequency	Monitoring Indicators	Reporting Requirement and Applicable Standards
		● Small native trees and shrub which bear fruits for birds and mammals to eat should be encouraged to grow but its height maintained well under the height of the transmission line. ● No herbicides used in the control of vegetation within the ROW. ● No open burning within the ROW or surrounding the site. ● Consider hiring local people living along the transmission line route to trim or cut vegetation along the ROW.		Visually monitor riparian buffer zones Photograph record	
Fauna	Pre-Construction	● Conduct a Critical Habitat Analysis based on IUCN Red List status of affected species.	Once before construction	List of IUCN Red List affected species	IUCN Red List
	Construction	● Wherever land clearing may result in encounters with wildlife and birds; all wildlife encounters must also be logged / recorded. ● Trees with nests of protected birds and other animals shall as far as possible be left standing till nesting period is over. ● Remove vegetation in the ROW in a direction to allow fauna to escape to the most intact nearby natural habitat ● Injured animals should be taken to the nearest veterinary clinic for treatment. ● Nest with eggs, or young animals shall be protected and left intact until the young have left the nest. ● Vegetative cover should be allowed to regenerate on the ROW as soon as possible to provide habitat for terrestrial fauna. ● If the transmission line crosses daily flyways and migration routes, visibility enhancing objects should be installed. ● Strictly prohibit hunting, poisoning, or killing of animals, whether protected species or not. ● Educate site workers on totally protected and protected species, and IUCN Red Listed species. ● Put up Wildlife Conservation posters at site offices and workers quarters. The consequences of hunting such species shall be clearly communicated. ● Construction and domestic waste will be appropriately stored and disposed of to avoid attracting wildlife to the construction areas.	Daily during construction activities	Record of any fauna encountered (injured, trapped, killed, etc.) Photograph record	

Impact / Issues	Phase	Management Plan	Timing and Frequency	Monitoring Indicators	Reporting Requirement and Applicable Standards
		● SFC shall be notified on any discovery of protected flora and fauna.			
	Operation and Maintenance	● Strictly prohibit hunting, poisoning, or killing of animals whether protected or non-protected species. ● Work closely with the SFC to collect information on any reports of bird collisions/ accidents due to the transmission line, to assess sensitive areas so that specific mitigation measures for high-risk areas can be undertaken. ● SFC shall be notified on any discovery of protected flora or fauna. ● The project can fund studies to be conducted on presence of wildlife in ROW, distribution of wildlife and density, seasonal patterns and migration corridors which can help better design future mitigation measures.	Continuous		

9.8.4 Public Health Management Plan

The objective of this Public Health Management Plan is to prevent nuisance, health and safety effects on the community particularly during project construction.

Noise, air pollution and traffic management are included as the identified impacts in **Chapter 8** are related to impacts on the public or community.

Table 9.8.5: Public Health Management Plan

Impact / Issues	Phase	Management Plan	Timing and Frequency	Monitoring Indicators	Reporting Requirement and Applicable Standards
General Health	Pre-Construction Construction	• Refer to mitigation measures recommended in **Chapter 8, Section 8.7**. • Maintain high quality housekeeping and the overall cleanliness of the site offices and base camp areas as well as the project site (refer to **Section 9.8.2**: Waste Management Plan and **Section 9.8.5**: OSH and Labour Management Plan). • Provision of adequate washing and toilet facilities to the workers will be made obligatory. • Vector control of mosquitoes and other pests will be managed including by minimizing mosquito breeding habitat (e.g., water logged area) and providing mosquito nets and other barriers at high use areas, including offices, canteens and bedrooms. • Inspect the construction area regularly for the limitation of the artificial stagnant water bodies created by rubbish, ground depressions, material storage and bunding. • Fogging and larval spraying around construction related areas regularly especially during dawn and dusk times only, and using products which are effective, but not impacting on occupational health. • In the event of any outbreak of illness of an epidemic / pandemic nature, the Proponent should comply with and carry out such regulations, orders, instructions, rules and SOPs as may be made by the State Government, State Disaster Management Committee, Ministry of Health Malaysia (MOH), State Health Department, local medical and health authorities. • Refer to Ministry of Health Malaysia's Annex 25: Covid-19 Management Guidelines for Workplaces (**Appendix 9.7.1**). Other guidelines on Covid-19 are available at MOH's website (https://covid-19.moh.gov.my/garis-panduan/garis-panduan-kkm) • The general public/local residents shall not be allowed in high-risk areas, e.g., excavation sites and areas where heavy equipment is in operation. • As per the procedure for hiring workers (both local and foreign workers), medical/ health screening of workers shall be made compulsory. Regular health inspection shall be conducted for workers and their families staying on site. Foreign workers entering Sarawak / Malaysia for the first time shall be rigorously screened for infectious diseases.	Daily	Site inspection	DOSH's Guidelines for Public Safety and Health at Construction Sites The Protection of Public Health Ordinance, 1999; The Protection of Public Health (Compounding of Offences) Regulations, 2020 Prevention and Control of Infectious Diseases Act 1988(Act 342) Prevention And Control of Infectious Diseases (Measures Within Infected Local Areas) (Movement Control) (No. 4) (Amendment) (No. 16) Regulations 2021 [Act 342] Ordinan Darurat (Pencegahan dan Pengawalan Penyakit Berjangkit (pindaan 2021)

Impact / Issues	Phase	Management Plan	Timing and Frequency	Monitoring Indicators	Reporting Requirement and Applicable Standards
		● Worker Code of Conduct to include rules on limiting interactions with local communities especially physical or sexual harassment, solicitation of prostitution, and alcohol or drug use; disciplinary action to be taken in such cases. ● The Contractor is also responsible for ensuring that no worker who has criminal record is employed at the project site.			
Noise	Construction	● Notify local community of commencement of project activities, between two and four weeks prior to construction. ● Limit construction working hours (7:00 am to 7:00 pm) to suit the project activity and site condition. ● Local residents should be notified when unavoidable work time occurs past daytime. ● All construction equipment and vehicles shall be well maintained, regularly inspected for noise emissions, and shall be fitted with effective muffler and other appropriate noise suppression equipment consistent with applicable national and local regulations. ● Noise level will be monitored regularly near sensitive receptors. ● Investigate any public complaint and take appropriate steps to settle them as soon as possible.	Daily	Site inspection of noise pollution Noise monitoring (see **Table 9.9.2**) Complaints register	DOE's Guidelines for Environmental Noise Limits and Control (Third Edition) 2019 WHO Guidelines for Community Noise, 1999 Quarterly Environmental Monitoring Report
Air Pollution	Construction	● Prohibit open burning on site and all solid wastes generated from the site are to be disposed of to a proper sanitary landfill. ● Implementing measures to limit vehicle speeds, particularly around sensitive receptors, for example by installing speed bumps. ● Air quality will be monitored regularly near sensitive receptors. ● Investigate any public complaint and take appropriate steps to settle them as soon as possible.	Daily	Visual observation of dust pollution Photograph record Air quality monitoring (see **Table 9.9.2**) Complaints register	Malaysia Ambient Air Quality Standard (MAAQS), 2013 Environmental Quality (Clean Air) Regulations, 2014 Environmental Quality (Control of Emission from Diesel Engines) Regulations, 1996. Quarterly Environmental Monitoring Report

9.8.5 Occupational Safety and Health Management Plan

The objective of Occupational Safety and Health management is to prevent nuisance, health and safety effects on Contractor's personnel and workers particularly during project construction.

Most occupational health and safety issues during the construction, operation, maintenance, and decommissioning of transmission line projects are common to BMTLP. These impacts include, among others, exposure to heat; physical hazards from use of heavy equipment and cranes; traffic accident; trip and fall hazards; exposure to electrical hazards from the use of tools and machinery; noise-induced hearing loss (NIHL); and bodily injury and illness caused by animal attack and bites.

Occupational health and safety hazards specific to any transmission line project primarily include:

- Contact with live power lines
- Working at height without protection
- Occupational noise
- Animal bites and stings
- Exposure to heat
- Electrocution

The following plan is established to ensure the occupational safety and health at the project site is well managed by the Contractor. This should be linked to the organisational HSSE which has been applied across company operations regionally (see **Section9.3**).

Table 9.8.6: Occupational Safety & Health Management Plan

Impact / Issues	Phase	Management Plan	Timing and Frequency	Monitoring Indicators	Reporting Requirement and Applicable Standards
OSH Management	Pre-Construction	● Contractor shall prepare a project specific Occupational Safety and Health / Labour Management Plan in accordance with SEB's requirements. ● The Contractor shall comply to the internal Sarawak Energy Rules and Code of Practice such as: 1. Electrical Safety Rules 2. Mechanical Safety Rules 3. Sarawak Energy Life-Saving Rules	On-going as required	Contractor HSSE Organizational Chart Job Description Key Performance Index (KPI) Contractor Internal HSSE Training Procedure and Record Contractor Stop Work Policy	Section 16, OSHA 1994 Clause ISO 45001:2018 HSSE Monthly Report
		● The Contractor to monitor compliances to Malaysia OSH legislation that are relevant to the OSH Management such as: 1. Occupational Safety and Health Act 1994 2. Factory and Machinery Act 1967 3. Construction Industry Development Board, Act 520 4. OSH guidelines mainly issued by DOSH, CID and Ministry of Health 5. Code of Practice (COP) mainly issued by DOSH, CIDB and Ministry of Health	On-going as required	HSSE Legal Register HSSE Non-Conformance Report (NCR)	Clause ISO 45001:2018
		● Establish a safe work system by implementation of Safety and Health Manuals and OSH Management Plans. The safety and health manuals should be designed in accordance with international standard or equivalent, such as BS ISO 45001:2017. The OSH Management Plans submitted by the Contractor shall cover the followings – 1. OSH Management Plan 2. OSH Manpower Management 3. Security Management Plan 4. Emergency Response Plan	On-going as required	HSSE Manual and procedure	PMO-OSH-PCS-3300 [OSH Management Process]

Impact / Issues	Phase	Management Plan	Timing and Frequency	Monitoring Indicators	Reporting Requirement and Applicable Standards
		5. Safe Work Practices and Procedures 6. Traffic Management Plan			
		● Prepare general policy statement in regards of safety and health of the workers and public, related to the work perform (Sec.16, OSHA 1994). The policy must at least show the company's commitment to comply with legal requirements and the content should be reviewed regularly. The latest revision or any changes made therein shall be notified to all stakeholders.	Before construction	Prepared in English and National Language. Latest revision endorsed by Senior Management. Copy displayed at strategic location. Changes in the policy brought to the attention of all stakeholders. Minimum expectation is to comply with applicable Legal requirement.	Section 16, OHSA 1994 PMO-HSE-POL-3000 [Occupational Safety and Health Policy]
		● Form a Safety and Health Committee to encourage employees' participation in the development of company's policy and safe system of work at the work place. ● Member of the committee must be given adequate training and resource to enable its members to carry out their duties in accordance with the requirements of Occupational Safety and Health (Safety and Health Committee) Regulations, 1996.	Monthly meeting and inspection record	HSSE Strategic Plan	Minute of Meeting
		● The Contractor shall be responsible in ensuring the relevant personnel adhere to the specified OSH requirements in the Contract Appendix D3 (Health, Safety, Security and Environment [HSSE] Requirements for Contractor]. ● Appoint an HSSE Officer (Sec.29, OSHA 1994) and a Site Safety Supervisor (Reg.25, BOWEC 1986) to advise on legal requirements and implement Safety and Health programs at the workplace.	Recruitment process	DOSH Green Book (SHO) DOSH Yellow Book (SSS) TMO Certificate TMS Certificate	Section 29, OSHA 1994 Regulation 25, BOWEC Regulations 1986.

Impact / Issues	Phase	Management Plan	Timing and Frequency	Monitoring Indicators	Reporting Requirement and Applicable Standards
		● The HSSE Officer and the Site Safety Supervisor (SSS) must be certified by DOSH and have relevant educational background and work experience. ● Appoint a Traffic Management Officer (TMO) and a Traffic Management Supervisor (TMS) to report and advice on traffic management and public safety for work that affects the public road.		Curriculum Vitae (CV)	Regulation 16, BOWEC Regulations 1986.
		● Conduct a comprehensive risk assessment to eliminate or reduce the impact due to exposure to inherent safety and health hazards. The method used during the hazard identification process must be a proactive method and performed by individuals with relevant knowledge and experience.	On-going as required	HIRARC Procedure HIRARC Register JHA	Internal reporting
		Reference to OSH Risk Management can be referred to as below: 1. HSE-Method Statement 2. Project Control Risk Management Procedure 3. Hazard Identification, Risk Assessment and Risk Control HIRARC Procedure by DOSH and/or PD internal procedure and Job Safety Analysis (JSA) 4. Contractor's Health and Safety Handbook	On-going as required	HSSE Manual and Procedure HIRARC Procedure Employee HSSE Handbook	PMO-OSH-PCS-3300 [OSH Management Process] Section 15, OSHA 1994.
		● Establish and implement Permit to Work (PTW) system in order to safeguard personnel, property and environment upon conducting high risk activities during the execution phase.	On-going as required	Permit to Work (PTW) procedure.	
		● Ensure that all machinery as stated in Regulation 10 of Factories and Machinery (Notification, Certificate of Fitness and Inspection) Regulations 1970 has been registered, inspected and has a valid Certificate of Fitness issued by the DOSH.	On-going as required	Machinery record Certificate of Fitness DOSH General Register	
		● All machinery operators must be trained and have a certificate of competency issued by DOSH (Sec.29, FMA 1967).	On-going as required	Certificate of Competency DOSH General Register/ Log book	HSE Internal Audit Report
		● Provide appropriate driver training and careful planning of haulage routes and times to minimize risks to the local community.	On-going as required	Journey Management Procedure Driver log book	

Impact / Issues	Phase	Management Plan	Timing and Frequency	Monitoring Indicators	Reporting Requirement and Applicable Standards
		● Ensure availability of emergency transports at all time.	On-going as required	Vehicle inspection report	
		● Set up an Emergency Response Plan (EMR) for all kinds of potential emergency situations in the workplace – Refer **Section 9.8.7**.	On-going as required	ERP Procedure	
		● Form and train the Emergency Response Team (ERT) to act during the crisis and organize emergency drill to familiarize all employees with emergency call, routes and assembly area.	Emergency drill (Biannual)	ERT organizational chart ERT appointment letter Emergency drill report	
		● Provide adequate information, instructions, training and supervision to employees. Training must be conducted regularly, and employee attendance records must be maintained. Employees should be retrained if there are significant changes in work procedures, machinery, materials and layout of the building.	On-going as required	HSSE Training Plan HSSE Training record Attendance record	● Internal reporting
		● Provide appropriate and adequate Personal Protective Equipment (PPE) as a temporary measure while waiting for more efficient control measure to be applied, or as an additional protection. ● PPE must be in accordance with standards approved by DOSH and provided without charging any fee or levy to the workers (Sec. 26, OSHA 1994).	On-going as required	PPE Procedure PPE Issuance and Inspection Record.	● SIRIM QAS International
OSH Management	Construction	Make reference to mitigation measures recommended in **Chapter 8, Section 8.8**	Daily, weekly and monthly as required by PET	Workplace Inspection Report HSSE register with action logs	Internal reporting
		Inspection and Audit: ● Contractor is responsible for conducting health and safety inspection daily, weekly and monthly and report to PET. ● Observation of non-compliances with the health and safety requirements of the Contract shall be documented and informed to PET and to be corrected by the Contractor promptly or by specific deadline instructed by PET.			
		Health Surveillance: ● Implement health surveillance program if an employee exposed or likely to be exposed to chemical hazardous to health as recommended by the	As recommended by the Assessor or OHD.	Chemical Health Risk Assessment (CHRA) Report	Section 28, OSHA 1994.

Impact / Issues	Phase	Management Plan	Timing and Frequency	Monitoring Indicators	Reporting Requirement and Applicable Standards
		Assessor or Hygiene Technician in the assessment or monitoring report (Sec.28, OSHA 1994). ● The health surveillance program must be conducted by an Occupational Health Doctor (OHD).		Health Surveillance Result	
		Public Safety and Traffic Management ● Make reference to mitigation measures recommended in **Chapter 8, Section 8.3.8, 8.5.11** and **8.8.3**. ● Place signage regarding safety of the construction place and other necessary item at the entrance of the project site. ● All advanced warning signs and traffic control devices (TCDs) must be installed in accordance with an approved Traffic Management Plan (TMP). ● Establish a traffic management team (TMT) to maintain traffic control devices (TCDs) and the emergency response team (ERT) to provide immediate action in times of emergency. ● All vehicles used at the project site should be roadworthy and comply with the requirements of the Road Traffic Ordinance 1958 (Ord. 48 of 1958). ● Convey information on the scope and timing of the construction activities to the road users through mass and/or social media. ● Ensure that the workers understand and comply with the standard safety procedures for handling heavy machinery, vehicles and equipment. ● All drivers must have a valid driving license, shall be responsible to know and obey all traffic rules and regulations. ● Speed limit of 30 km/h shall be enforced for construction vehicles using access roads that is shared with the community. ● Drivers are prohibited from operating vehicles if they are under the influence of alcohol or other intoxicants. ● Operators and drivers are to report any accident, near miss, dangerous condition to the Site Safety Officer. ● Access roads should be maintained in good condition by attending to potholes, corrugations and stormwater damage as soon as these develop. ● The Contractor shall immediately repair and/or compensate for any damage caused by the project to public access roads, properties and community facilities.	Quarterly	Traffic Management Plan (TMP) Traffic Management Safety Report (TMSR) Visual observations and inspection of traffic management and safety (i.e., signboards, warning signs, vehicles parking at roadside etc.) Photograph record Maintenance record Complaints register	Arahan Teknik Jalan 2C/85 Sarawak Rivers Ordinance, 1993 Environmental Quality (Control of Emission from Diesel Engines) Regulations, 1996 Traffic rules, safety procedures and regulation as stipulated by the Road Transport Department

Impact / Issues	Phase	Management Plan	Timing and Frequency	Monitoring Indicators	Reporting Requirement and Applicable Standards
		• Do not wash vehicles in streams **Loads** • All loads transported on vehicles are to be properly secured with wire rope, chain and buckle or cargo webbing. • Vehicles are not to be overloaded. • Workers are not to ride on loads being moved. • When over-length materials are transported, a red flag or light must be placed at the end of the material at the rear of the vehicle. (Note: overhanging materials are not permitted on public roads). • Where workers are required to work alongside roads or act as spotters or flagmen, then reflective safety vests or jackets are to be worn at all times. **Machinery and Plant** • All moving equipment must be fitted with audible and visible reversing alarms. • Signalmen are to be used whenever large cranes or equipment are moved around the site. • All equipment must be parked neatly in a designated parking area at the end of each shift. • Cranes should be parked with booms in a direction where collapse would cause the least damage. • Excavators are to be parked with their buckets or blades on the ground. • Passengers are not to ride on any construction vehicle except for a good reason, and then only in the seat provided for that purpose. Riding on a drawbar or in the bowl or bucket of a machine is strictly forbidden.			
		Risk from Tree Felling • The person in charge of tree felling controls and supervises the work to ensure that safety precautions are being observed. • Identify hazards specific to the site before any tree felling activity. Fell the trees using safe felling techniques • Ensure that only competent person undertake the task of tree felling with appropriate tools and PPE.	On-going as required	Accident Investigation and Reporting Procedure	Internal reporting

Impact / Issues	Phase	Management Plan	Timing and Frequency	Monitoring Indicators	Reporting Requirement and Applicable Standards
		● Provide skill training on proper method of handling felling tools for manual tree felling.			
		Accident Investigation and Reporting ● Contractor shall report any accidents, dangerous occurrence, occupational poisoning and occupational diseases to DOSH or other relevant authorities. ● The report must be extended to SEB.	Before 31st January of the following Year (JKKP8).	Accident Investigation and Reporting Procedure Notification / Communication log Form JKKP 6/7/8/9/10	Section 32, OSHA 1994.
		Personal Protective Equipment (PPE): ● Provide appropriate and adequate PPE as a temporary measure while waiting for more efficient control measure to be applied, or as an additional protection. ● PPE must be in accordance with standards approved by DOSH and provided without charging any fee or levy to the workers (Sec. 26, OSHA 1994).	On-going as required	PPE Procedure PPE Issuance and Inspection Record	SIRIM QAS International

9.8.6 Labour and Local Content Management Plan

Labour and Local Content Management Plan for the pre-construction and construction phases are to enhance positive impacts on the economy and employment in project-affected communities, especially among low income and single-headed households. Recruitment procedure should ensure that local people are employed wherever possible, and this is done in a fair, consistent, and transparent manner by the Proponent and its contractors.

Workers from the settlements along the transmission line will be given priority for low skilled jobs such as vegetation clearance, security guards, cleaning, etc. To maximise local procurement, the Proponent should also require contractors, as part of the tendering process, to develop a purchasing strategy stipulating how local purchase of goods and services will be optimised in particular with respect to transportation, waste management and disposal, and catering.

Table 9.8.7: Labour and Local Content Management Plan

Impact / Issues	Phase	Management Plan	Timing and Frequency	Monitoring Indicators	Reporting Requirement and Applicable Standards
Labour Management	Pre-construction, Construction and Operation	Refer to mitigation measures recommended in **Chapter 8, Section 8.5.8** **Labour Policy:** ● Develop and implement a Local Employment and Content Plan to maximise the employment of local labour and Malaysian nationals. This plan should include provisions for equal opportunity (non-discrimination by gender, ethnicity, religion, and age). This plan should also facilitate identification and selection of qualified local companies to provide needed supplies and services. ● Company policies must at least demonstrate the top management's commitment to comply with National labour legal requirements and to prohibit illegal employment, human trafficking or any practice of forced labour. All employees must be informed of the content of the policy and also any changes made to it by the employer. ● No use of child labour (workers under age 18) or forced labour is allowed. ● A worker's grievance mechanism will be in place. **Recruitment Policy:** ● Measures will be put in place to ensure employment is based on merits and to ensure no job applicant is discriminated against on the basis of his or her gender, marital status, nationality, age or religion belief. ● Employment opportunities should first be offered to the local community if the skills are available within the community. SEB will notify the District Office of available employment opportunities. ● Local people living nearby the transmission line route may be hired under mutual contract to trim or cut vegetation along the ROW. ● Training in health and safety and technical areas will be provided to all personnel. ● The Contractor shall comply with the labour and occupational health and safety Laws and solely accountable for obtaining residential and work permits, visas and any other clearances (if any) for the Contractor's personnel which are required in accordance with any applicable Laws.	Before the start of construction and throughout the construction and operation phases.	Visual observation Employment Policy and record Employment record and agreement	Sarawak Labour Ordinance (Act A1237) – Chapter 76, 1952 Immigration Act 1959/1963 (Act 155) Internal reporting Minimum Wage Order 2020

<table>
<tr><th>Impact / Issues</th><th>Phase</th><th>Management Plan</th><th>Timing and Frequency</th><th>Monitoring Indicators</th><th>Reporting Requirement and Applicable Standards</th></tr>
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Local Suppliers:

Local suppliers to be used where possible
The Proponent should develop a database of local companies, especially those that qualify as potential service providers (e.g., construction companies, transportation, security, suppliers).
Information on availability of employment and business opportunities should be disseminated through the longhouse/village headmen and/or the committee.
Proponent will coordinate with local authorities in order to avoid opportunistic, informal markets developing at the perimeters of the construction camps in order to ensure that local settlements at the project area and nearby towns benefiting from workers' spending.

Contract of Service:

All persons employed shall be given a written contract which clearly states the terms and conditions to be agreed upon. Important information such as methods of contract termination and salary must be stated.
If there is an issue of employee misconduct, the case should be dealt with in accordance with proper and impartial disciplinary procedures.

Minimum Wage:
Minimum wage will be paid at the prevailing rate. The minimum wage based on the Minimum Wage Order 2020 rates payable to an employee were:
<table>
<tr><td colspan="5">Minimum wage rate at City Council areas</td></tr>
<tr><td rowspan="2">Monthly</td><td colspan="3">Daily</td><td rowspan="2">Hourly</td></tr>
<tr><td colspan="3">Number of Working Days in a Week</td></tr>
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<tr><td>RM 1,200</td><td>RM46.15</td><td>RM55.38</td><td>RM69.23</td><td>RM5.77</td></tr>
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</td><td></td><td></td><td></td></tr>
<tr><td></td><td></td><td>Working Hour:
● Working hours should not exceed 8 hours a day or not more than 12 a day including overtime. No person is allowed to work more than six days a week in a row without a break.

Working Overtime:
● Overtime work shall be voluntary except in urgent circumstances such as emergency situations or work which if not carried out will cause injury to any person or severe loss.

Annual Leave:
An employee shall be entitled to paid annual leave of –
a. Eight days for every twelve months of continuous service with the same employer if he has been employed by that employer for a period of less than two years.
b. Twelve days for every twelve months of continuous service with the same employer if he has been employed by that employer for a period of two years or more but less than five years.
c. Sixteen days for every twelve months of continuous service with the same employer if he has been employed by that employer for a period of five years or more.</td><td>Quarterly</td><td>Visual observation

Employment record and agreement</td><td>Sarawak Labour Ordinance (Act A1237) – Chapter 76, 1952</td></tr>
</table>

Impact / Issues	Phase	Management Plan	Timing and Frequency	Monitoring Indicators	Reporting Requirement and Applicable Standards
Contractor Facility, Storage Site and Worker Camps	Pre-construction, Construction and Operation	● Prepare Worker Accommodation Plan which should address minimum accommodation standards for the workers (no. persons per room, room size, ventilation etc, no. persons per toilet etc), and set standards for both the main accommodation and temporary accommodation ● Prior to beginning the construction works, the general layout of the site office and onsite base camp at each construction site should be designed to plan to include important structures and provision such as: 1. Clean water supply sources (drinking and washing) and storage tanks or taps. 2. Sanitary facilities and washing areas (at least 30 m from watercourses). 3. Communal kitchens. 4. Waste handling and disposal facilities. 5. Power supply and genset house. 6. Proper site drainage. 7. First aid kits and vehicles for emergency cases. ● Project site offices and base camps shall be sited far and isolated (at least 500 m) from local communities to minimize worker-local community interactions, which should help reduce social and cultural conflicts, as well as the risk of spread of communicable diseases.	Daily, weekly monthly	Certificate for Accommodation Notice of Occupation	**Part IIIA: Accommodations** Workers' Minimum Standards of Housing and Amenities Act 1990 (Act 446) Guidelines on Temporary Permit Application for Building for Workers' Quarters Within Construction Sites (Ministry of Local Government and Housing Sarawak)

9.8.7 Emergency Response Plan (ERP)

Besides SEB's existing ERP, the Contractor will establish and implement an ERP for 24-hour support to the project in case of unforeseen contingencies during the construction phase.

A workplace emergency is an unforeseen situation that threatens workers, customers, or the public; disrupts or shuts down operations; or causes physical or environmental damage. At a minimum, an emergency action plan must include, but not be limited to the following:

- A preferred method for reporting fires and other emergencies;
- An evacuation policy and procedure;
- Emergency escape procedures and route assignments, such as floor plans, workplace maps, and safe or refuge areas;
- Names, titles, departments and telephone numbers of individuals both within and outside the organization to contact for additional information or explanation of duties and responsibilities under the emergency plan;
- Procedures for workers who remain to perform or shut down critical plant operations, operate fire extinguishers, or perform other essential services that cannot be shut down for every emergency alarm before evacuating;
- Rescue and medical duties for any workers designated to perform them;
- Designated assembly location and procedures to account for all workers after an evacuation;
- The site of an alternative communications centre to be used in the event of a fire or explosion;
- A secure onsite or offsite location to store originals or duplicate copies of accounting records, legal documents, your workers‟ emergency contact lists, and other essential records; and
- A way to alert workers on how to evacuate or take other action, and how to report emergencies.

9.8.7.1 Roles and Responsibility

It shall be the duty of the Contractor to allocate adequate resources to ensure the followings:

- Provision and maintenance of emergency equipment and rescue facilities;

- To establish a system to ensure effective communication in the event of emergency.
- Emergency Response Team (ERT) has been established and authorized to independently respond to emergency call.
- All employees and members of the public who might be affected by the incident to be given adequate training or information.

The designated ERT must meet the following criteria:

- All members of the ERT must be physically fit and trained adequately to operate emergency equipment.
- The Emergency Commander is responsible to command and coordinate the ERT and make important decisions, for example, to instruct for evacuation during emergencies.

The proposed ERP is outline in the following **Table 9.8.8**.

Table 9.8.8: Emergency Response Plan (ERP)

Impact / Issues	Phase	Management Plan	Timing and Frequency	Monitoring Indicators	Reporting Requirement and Applicable Standards
Personnel Injury	Construction and Operation	**First Aid Facility** ● The employer shall provide the first aid box in accordance with the standards stipulated under the Fourth Schedule of Factories and Machinery (Safety, Health and Welfare) Regulations 1970. ● The first aid box must be placed at a conspicuous area and marked with a sign. **Competent First Aider** ● The first aid box should be placed under the care of a responsible person, who is available during all work shifts. ● The appointment of responsible person shall be based on the following criteria: ► Physically fit and not a carrier of any infectious diseases. ► Trained in first aid treatment according to standard syllabus by recognized training provider. ► The person is authorized leave his work station to execute his / her duty as a first aider. **Communication** ● Communication devices such as walkie-talkies or mobile phones must be provided and tested in good condition. **Emergency Contact Number** ● The emergency contact number must be kept up to date. The list should include the nearest external emergency services and other bodies such as: ► Hospitals. ► Malaysia Civil Defence Force (or JPAM). ► NGOs such as Malaysian Red Crescent, St. John Ambulance.	First aid box (Weekly)	Emergency Response Procedure for Personnel Injury First aid box inspection checklist First aider certificate Emergency contact number	Monthly HSSE Report Regulation 38, Factories and Machinery (Safety, Health and Welfare) Regulations, 1970
Fire and Explosion	Construction and Operation	**Firefighting Equipment** ● Appropriate type and adequate number of firefighting equipment must be provided at the work area. ● The firefighting equipment must be placed in a conspicuous place or unobstructed by any object.	Monthly	Emergency Response Procedure for Fire and Explosion Workplace inspection report	Monthly HSSE Report Regulation 22, Factories and Machinery (Safety, Health and Welfare) Regulations, 1970

Impact / Issues	Phase	Management Plan	Timing and Frequency	Monitoring Indicators	Reporting Requirement and Applicable Standards
		● Fire extinguishers must be regularly inspected and maintained to keep them in good condition. The fire extinguishers must also have a certificate of inspection issued by the Fire and Rescue Department. ● Monitor all areas of the project site for fire hazard. ● In case of fire, alert all personnel, location and nature of the fire or emergency. ● Ensure that all personnel are safely evacuated. **Awareness and Training** ● All employees must be trained to operate fire extinguishers. **Emergency Contact Number** ● The emergency contact number must be kept up to date. The list should include the nearest Fire and Rescue Department (BOMBA). **Assembly Point** ● The assembly point must be provided in case there is a need for the employee or visitor to evacuate during emergency. ● The area must have the following characteristics: 1. The assembly point is visibly marked with a proper sign and free from any obstruction. 2. The assembly point is located at safe area, away from the work area. No hazardous chemical or machine kept at the surrounding area. 3. The size of the assembly point can accommodate the number of employee and visitors at the place of work. **Welfare Facility** ● The area is provided with basic facilities such as adequate lighting, washroom and clean water.		Firefighting equipment inspection and maintenance record Firefighter training record or fire extinguisher training record Emergency contact number Assembly point sign	
Traffic Accident	Construction	**Emergency Vehicle** ● Emergency Vehicle complete with basic medical equipment & rescue and communication equipment should be provided. ● The vehicle shall come with the followings: ► Emergency Treatment Equipment. ► First Aid Medication. ► Stretcher.	Quarterly	Inventory, inspection and maintenance of traffic control devices (TCDs) Traffic accident record	Traffic Management Safety Report (TMSR) Sarawak Rivers Ordinance, 1993

Impact / Issues	Phase	Management Plan	Timing and Frequency	Monitoring Indicators	Reporting Requirement and Applicable Standards
		► Oxygen Tank (Medical Use). **Emergency Contact Number** The emergency contact number must be kept up to date. The list should include the nearest external emergency services and other bodies such as: ● Police. ● Hospitals. ● Malaysia Civil Defence Force (JPAM). ● NGOs such as Malaysian Red Crescent, St. John Ambulance.			

9.8.8 Site Rehabilitation Plan

The Site Rehabilitation Plan addresses how the sites and components of the BMTLP are to be handled at the completion of construction phase. The rehabilitation plan describes how to ensure proper disposition of all components and to avoid disruption of the project site, individuals and/or any other applications impacted by the construction works of this project.

The objective of the rehabilitation activities is to render the areas safe from physical or toxic risks to human or wildlife, and to revegetate denuded spaces for protection and aesthetics. SEB and their Contractors will begin rehabilitation of disturbed areas as soon as practicable after construction is completed.

The following **Table 9.8.9** details the Site Rehabilitation Plan for the BMTLP.

Table 9.8.9: Site Rehabilitation Plan

Impact / Issues	Phase	Management Plan	Timing and Frequency	Monitoring Indicators	Reporting Requirement and Applicable Standards
Clearing of Debris	Decommissioning	• All decommissioned areas shall be free of any visible debris of any kind other than biomass from clearing of roads and right-of-way. • Equipment and material waiting for transportation may only be stored within the project right-of-way with the Project Proponent's expressed permission and only in places permitted by the Project Proponent.	Weekly site inspection until project handover Monitoring for major slope failures shall take place at 12, 18 and 24 months after the handing over	Visual verification at site or location of project activities Photographs should be labelled and dated for record purposes, and shows work progress	Monthly HSSE Report Malaysian Public Works Department (JKR) [Jabatan Kerja Raya] manual "Arahan Teknik"
Restoration of Drainage and Access Roads	Decommissioning	• Natural drains (creeks) shall as far as technically possible be restored. • Vacated areas shall be furnished with gentle contours and proper drainage so no area will be prone to flooding or water logging. • Rehabilitate access roads prior to leaving the site.			
Slopes	Decommissioning	Slopes that have been cut or otherwise cleared of the natural vegetation are anticipated all over the project site. The following measures are recommended for slopes: **a) Slopes Created by Deposits** Slopes created by deposited of excess soil are inherently unstable. Such slopes shall be made safe and be prevented from contributing to siltation of water ways by: • Slopes steeper than 25 degrees shall be terraced and furnished with bench drains and cascade drains. • All slopes exceeding 15 degrees and covering more than 100 square meters shall be re-vegetated with grasses or leguminous cover crops unless they already are revegetated naturally. • Bushes or light demanding tree species of local species shall be planted on terraces with a spacing not exceeding 5 meters. • Any slope that carries signs of gully formation shall be further stabilised by e.g., rock filling or concrete cascade drains. • Inaccessible slopes, showing signs of being prone to landslides may be stabilised by wooden debris and rocks.			
		b) Slopes Created by Cutting Slopes created by cutting along roads to be maintained in use (if any) shall be secured according to the Malaysian Public Works Department (JKR) [Jabatan Kerja Raya] manual "Arahan Teknik".			

Impact / Issues	Phase	Management Plan	Timing and Frequency	Monitoring Indicators	Reporting Requirement and Applicable Standards
		c) Other Bare Slopes ● All denuded slopes exceeding 15 degrees and covering more than 100 square meters shall be re-vegetated with grasses or leguminous cover crops. ● Slopes steeper than 25 degrees and covering more than 100 square meters shall be terraced and furnished with bench drains and cascade drains. ● Where terracing is done and there is no development below the slope, local bushes or trees of light demanding species shall be established on terraces at a spacing not exceeding 5 meters. If there is development such as roads or buildings, above measure shall be supported by bench drains and cascade drains.			
Re-vegetation	Decommissioning	● Unless otherwise requested by the Project Proponent, all vacated areas must be revegetated. ● The area coverage by the grass or other vegetation shall not be less than 75% at the time of decommissioning and with no single bare patches larger than 2 m^2.	Weekly site inspection until project handover Monitoring for failure of establishing vegetation on cleared areas shall take place at 12, 18 and 24 months after the handing over	Visual verification at site or location of project activities Photographs should be labelled and dated for record purposes, and shows work progress	Monthly HSSE Report Quarterly Environmental Monitoring Report
Managing Excess Materials and Waste	Decommissioning	**Records** ● Records must be established showing ownership and immediate destination of all material leaving the site. The Project Proponent shall make random checks to verify waste is deposited where the record shows, they are deposited. Unlawful disposal must be reported to the authorities.	Weekly site inspection until Project handover	Visual verification at site or location of project activities Photographs should be labelled and dated for record purposes, and shows work progress	Environmental Quality (Scheduled Wastes) Regulations, 2005

Impact / Issues	Phase	Management Plan	Timing and Frequency	Monitoring Indicators	Reporting Requirement and Applicable Standards
	Decommissioning	**Waste** Sewage: ● Septic tanks and other sewerage facilities must be cleaned before removal. ● Sludge/sewage in the tanks shall be deactivated by a bio-enzyme agent before being emptied. This will speed up the bacteriological process and the contents may after some time – as recommended for the product used – be disposed of anywhere as it will be completely inactive. ● Septic tanks, intact or damaged, must be completely removed from the project site. Scheduled waste: ● All scheduled waste must be removed totally from the project area. ● Scheduled waste transfer and disposal contractor shall be appointed by the Contractor. ● The contractor must be licensed by the DOE. Scheduled materials must be disposed accordingly as per DOE's requirement under Environmental Quality (Scheduled Wastes) Regulations, 2005. Solid Waste: ● Solid wastes generated throughout the construction phase shall be properly transported and disposed of by licensed contractors at disposal sites approved by the local authority. ● No indiscriminate dumping of waste on site is allowed. All solid wastes on site should be properly disposed of at approved sites.	Weekly site inspection until project handover	Visual verification at site or location of project activities Photographs should be labelled and dated for record purposes, and shows work progress	Environmental Quality (Scheduled Wastes) Regulations, 2005 Guidelines on Construction Waste Management by CIDB Malaysia
Temporary Structures and Equipment	Decommissioning	All buildings and other above ground structures, which will not be used by the Project Proponent during operation, shall be dismantled: ● All glass, metal (other than nails, screws and bolds but including standard building fittings such as plumbing, door knob and hinges, mosquito netting, fencing railings, gates, roofing), and plastic must be removed from the project site to be deposited/recycled in accordance with national, state and local regulations. ● Wood debris may be broken and scattered to obtain ground contact before being left for natural decomposition.	Weekly site inspection until project handover	Visual verification at site or location of project activities Photographs should be labelled and dated for record purposes, and shows work progress	Guidelines on Construction Waste Management by CIDB Malaysia

Impact / Issues	Phase	Management Plan	Timing and Frequency	Monitoring Indicators	Reporting Requirement and Applicable Standards
		● Brick and concrete walls or floors shall be broken and scattered if not removed from the site for aesthetic reasons. Walls shall be levelled with the surrounding terrain. ● Storage tanks (if any) shall be drained and removed from site. ● All temporary structures such as site office, waste and chemical storage sheds, mobile toilets or skid tanks (if any) shall be removed from site. ● All machinery (excavators, trucks, trailers) and equipment shall be removed from site. ● Burning of debris or burning in order to obtain e.g., metal for recycling is not permitted without specific permission by the relevant authorities (NREB).			
Chain-Of Custody for Waste	Decommissioning	● Ensure all waste or material for recycling is taken where it is intended. This shall be done through contractual arrangements and through random verification checks. ● The Contractor shall, through contractual arrangements, ensure waste of any kind is deposited in sites approved by competent authorities and or/landowners of such deposit. ● Where material is given to or removed without cost by members of the local communities, such removal and destination shall be recorded, and clear instruction given to the recipient as to the seriousness of responsible and safe deposit.	Weekly site inspection until project handover	Visual verification at site or location of project activities Photographs should be labelled and dated for record purposes, and shows work progress	Guidelines on Construction Waste Management by CIDB Malaysia
Burning Of Waste	Decommissioning	● Burning of waste is not permitted under the law, but permits may be given by the NREB. If such permit is obtained, the Contractor is responsible to ensure that only wooden debris is burned. All other materials such as plastic, rubber, synthetic materials (e.g., fibre, nylon) must be sorted and disposed of without burning.			
Recycling, Repurposing	Decommissioning	● All decommissioned materials shall as far as technically and financially feasible be recycled or otherwise reused. ● Buildings, facilities that are prefabricated in modules or assembled in a manner that can be disassembled again will be demolished, and the modules stored for later use elsewhere. ● Other reusable materials, which cannot be utilised by the contractor or commercially disposed of shall be offered to local communities provided these materials do not pose any risk to the environment or			

Impact / Issues	Phase	Management Plan	Timing and Frequency	Monitoring Indicators	Reporting Requirement and Applicable Standards
		humans. Nevertheless, this shall not prevent the Contractor from ensuring the area is cleared according to plans or from preventing decommissioned material from being indiscriminately discarded outside designated waste deposit area.			

9.8.8.1 Implementation Schedule

Based on the tentative project implementation schedule, the demobilisation of the construction team and the handover are anticipated by October 2024. The measures recommended in previous sections shall be completed before the last executive member of the Contractor leaves the site and no later than 6 months after handover to the Project Proponent with the exception that all hazardous waste must be removed from the site before handing over.

9.9 MONITORING PROGRAMS

The objective of the environmental and social monitoring program is:

- To assess the changes in environmental conditions.
- To ensure compliance with regulatory requirements.
- To monitor the effective implementation of mitigation measures and management action plan.
- To warn about significant deteriorations in environmental quality so that further prevention action can be undertaken.

During construction, the Proponent will check the performance of the Contractor to assure the works reflect the requirements specified in the ESMPs and ESIA approval conditions. The Contractor shall engage an independent environmental consultant to undertake the periodic monitoring. The Contractor shall submit the Environmental Monitoring Reports (prepared according to the approved ESIA) to the NREB to be reviewed.

Table 9.9.1 and **Table 9.9.2** presents the environmental monitoring activities to be conducted during all phases of the transmission line construction by SEB and the Contractor respectively. The monitoring program describes:

1. Phase and aspects
2. Timing and frequency
3. Location
4. Methodology and parameters to monitor
5. Reference standard / compliance limit
6. Responsibility

Table 9.9.1: Proposed Monitoring Programs Under SEB Responsibilities

Phase / Aspects	Timing and Frequency	Location	Methodology and Parameters to Monitor	Reference Standard/ Compliance Limit	Responsibility
PRE-CONSTRUCTION					
Stakeholder Engagement	Quarterly Half yearly	Project site and affected communities	• Record of stakeholder engagement undertaken • ESIA report display • Stakeholder register • Meeting minutes • Grievance form received and feedback (number, type, level, actions and status) • Compensation report / record • Commitment tracker • Photograph record	• HSAP requirement – P1, P13 • Monthly report on stakeholder engagement	SEB
Land acquisition and compensation (LALRP)	In advance of land acquisition	Transmission line ROW	• Baseline study of affected households: ► Income ► Livelihood ► % of income / livelihood affected by loss of land • Provision of compensation according to LALRP (Compensation report / record)	• HSAP requirement – P13	SEB
	Quarterly following land acquisition until livelihoods are restored	Transmission line ROW	• Affected households' income and livelihoods	• HSAP requirement – P13	SEB
	Monthly	Project site and affected communities	• Provision of compensation for un-planned acquisition of land, according to LALRP (Compensation report / record)	• HSAP requirement – P13	SEB
Social Issues	Monthly	Project site and affected communities	• Identify any outstanding issues • Monitor the resolution of complaints and grievances of affected people or stakeholders • Photograph record	• HSAP requirement – P1, P4, P5, P10, P13 • Monthly report	SEB

Phase / Aspects	Timing and Frequency	Location	Methodology and Parameters to Monitor	Reference Standard/ Compliance Limit	Responsibility
Project Benefits and Local Content	Monthly	Project site and affected communities	● No. of CSR projects that transmission line -affected communities are able to access ● Expenditure on CSR projects that transmission line -affected communities are able to access ● No. of men and women residing in transmission line - affected communities that have participated in training programmes ● No. of men and women residing in transmission line - affected communities employed on TL Construction	● HSAP requirement – P10	SEB
Waste (Training)	Half yearly	Project site and storage facility	Audit of records to demonstrate all contractor/sub-contractor staff have received the relevant training: ● Evidence of training provided ● Photograph record	● HSAP requirement – P16, P24, I18 ● Level of training required	SEB
Waste Generation	Half yearly	Construction areas/ workers quarters and storage facilities	Audit of waste generation records (by waste stream and including scheduled wastes) to ensure they have been completed accurately: ● Evidence that waste data and management records have been completed ● Volumes of wastes generated by type, and by treatment (re-used, recycled, landfilled etc) ● Photograph record	● Records completed as required	SEB
Waste Management	Half yearly	Construction areas/ workers quarters and storage facilities	Audit of any waste management failures: ● Incidents of water pollution or soil contamination ● Health and safety incidents relating to waste management ● Incidents of food waste attracting wildlife ● Photograph record	● Incident reports	SEB
Waste Disposal	Half yearly	Construction areas/ workers quarters and storage facilities	Audit of final destination/use of waste generated (including scheduled waste): ● Evidence that waste was correctly collected / transported / treated / disposed of by a licensed operator ● Volumes of waste re-used or recycled ● Photograph record	● Required standards of waste collection, transport, treatment and disposal.	SEB

Phase / Aspects	Timing and Frequency	Location	Methodology and Parameters to Monitor	Reference Standard/ Compliance Limit	Responsibility
				• Consignment notes for scheduled waste disposal / recovery	
Land acquisition and compensation (LALRP)	Quarterly	Transmission Line ROW	• Review existing baseline data and gather additional socio-economic information, as necessary, on sample affected households	• HSAP P-13	SEB
	2 years after land acquisition	Transmission Line ROW	• Resettlement Audit	• HSAP P-13	SEB
Social Issues	Monthly	Project site and affected communities	• Monitor the resolution of complaints and grievances of affected people or stakeholders • Affected communities' perception survey (biannual) • Photograph record	• HSAP requirement – P1, P4, P5, P10, P13 • Compliance with Stakeholder Engagement Plan	SEB
Cultural Heritage	In case of coinciding a cultural asset	Transmission line ROW	• Visual inspection • Interviews with the surveyor and local people near the site • Photograph record	• HSAP requirement – P15 and P17 • Malaysia National Heritage Act 2005 and Sarawak Cultural Heritage Ordinance 2019	SEB
Slopes and ROW	12 months after handover and subsequently half yearly	Tower sites and transmission line ROW	• Visual inspection and verification at tower sites, ROW or at sensitive slope areas • Photograph record	• HSAP requirement –P5, P20	SEB
Health, Safety and Security	Quarterly	Transmission line ROW and tower sites	• Visual inspection / observation of PPE usage, use of warning signs. • Use of PPE and vehicles • Records on incidents involving the public, including near misses and injuries • Non-compliances, recorded, resolved and outstanding • Incident frequency • Lost-time Incident Frequency • Fatalities (No. and frequency rate)	• HSAP requirement – P8, P13, P16, P18 • Sarawak Energy Rules and Code of Practice • PMO-HSE-POL-3000 [Occupational Safety and Health Policy] • PMO-OSH-PCS-3300 [OSH Management Process]	SEB

Phase / Aspects	Timing and Frequency	Location	Methodology and Parameters to Monitor	Reference Standard/ Compliance Limit	Responsibility
			● Traffic incident frequency ● Photograph record	● Occupational Safety and Health Act 1994	
Labour And Working Condition	Annually	Labour force involved in maintenance work	● Visual inspection / observation of PPE usage ● Workforce record – numbers of employees by local / non-local, gender, etc.	● Compliance with Human Resource policies and procedures	SEB
Electromagnetic Field (EMF):	Annually	At nearest sensitive receptors within the impact zone (Transmission line ROW).	In-situ EMF measurement using RS Multi Field EMF Meter for: Gauss (mG) or Tesla (uT)	● HSAP requirement – P5, P8, P16, P18, I18 and P17 ● Malaysian Standard and International Commission on Non-Ionizing Radiation Protection (ICNIRP) Guidelines	SEB
		Along the Transmission Line route	Ground inspection to make sure no dwellings/houses are being built within or near to the ROW		

Table 9.9.2: Proposed Monitoring Programs Under Contractor Responsibilities

Phase / Aspects	Timing and Frequency	Location	Methodology and Parameters to Monitor	Reference Standard/ Compliance Limit	Responsibility
ESCP	Weekly	Tower site and transmission line ROW	• Visual inspection and verification at site or location of project activities • Photograph record	• HSAP requirement –P5, P20	Contractor
Vegetation	Quarterly	Transmission line ROW	• Visually inspection of riparian buffer zones • Photograph record	• Compliance with Biodiversity Management Plan • Record of any protected plants cleared or protected from clearance	Contractor
Water Quality (River)	Quarterly monitoring and reporting to NREB	At selected river and streams near work sites Upstream and downstream of waterways	Visual observation Photograph record Grab sampling and in-situ sampling for the following parameters: • Temperature, pH value, Biochemical Oxygen Demand (BOD), Chemical Oxygen Demand (COD), Dissolved Oxygen (DO), Turbidity, Total Dissolved Solids (TDS), Total Suspended Solids (TSS), Ammoniacal Nitrogen, Oil and Grease, Total Coliform Count (TCC), Faecal Coliform Count (FCC) The following heavy metals content will be evaluated for water samples collected within 8 km radius of the water intake points and gravity feed water catchment areas: • Aluminium (Al), Arsenic (As), Barium (Ba), Cadmium (Cd), Chromium, Hexavalent (as Cr6+), Chromium, Trivalent (as Cr3+), Copper (Cu), Iron (Fe), Lead (Pb), Manganese (Mn), Mercury (Hg), Nickel (Ni), Selenium (Se), Silver (Ag), Tin (Sn), Zinc (Zn)	• HSAP requirement – P21 • Baseline Data / Results • Class IIB of National Water Quality Standard for Malaysia (NWQSM)	Contractor
Water Quality (Sewage)	Monthly monitoring and quarterly reporting to NREB	Worker Camps, at Septic Tanks / STP final discharge outlet/s	Visual observation Grab sampling and in-situ sampling for: • Temperature, pH value, BOD, COD, TSS, O&G, Ammoniacal Nitrogen, Nitrate-nitrogen, Phosphorous • Photograph record • Check septic tank/ STP desludging record	• HSAP requirement – P21 • Standard B, Environmental Quality (Sewage) Regulations 2009	Contractor

Phase / Aspects	Timing and Frequency	Location	Methodology and Parameters to Monitor	Reference Standard/ Compliance Limit	Responsibility
Air Quality	Quarterly monitoring and reporting to NREB	At nearest sensitive receptors within the impact zone (transmission line and access roads corridor and river corridor).	Visual observation In-situ measurement using portable ambient air quality sampler for:	● HSAP requirement – P16, P24, I18 ● Baseline Data/Results ● Malaysian Ambient Air Quality Standards, 2013	Contractor
			● Particulate Matter Less Than 10 Microns (PM_{10})	● 40 µg/m^3 (1 year average) ● 100 µg/m^3 (24-hour average)	
			● Particulate Matter Less Than 2.5 Microns (PM2.5)	● 15 µg/m^3 (1 year average) ● 35 µg/m^3 (24-hour average)	
Noise Level	Quarterly monitoring and reporting to NREB	At nearest sensitive receptors within the impact zone (transmission line and access roads corridor and river corridor).	Visual observation In-situ Noise measurement using integrating sound level meter. ● Described in terms of tenth and ninetieth percentiles (L10 & L90), equivalent continuous sound pressure level (Leq) and minimum and maximum instantaneous levels (Lmin & Lmax)	● HSAP requirement – P16, P24, I18 ● Baseline data/results ● First Schedule of the Guidelines for Environmental Noise Limits and Control (Third Edition, 2019) ► 55 dB(A) for day time ► 50 dB(A) for night time	Contractor
Waste (Training)	Quarterly (Contractor)	Project site and storage facility	Audit of records to demonstrate all contractor/sub-contractor staff have received the relevant training: ● Evidence of training provided ● Photograph record	● HSAP requirement – P16, P24, I18 ● Level of training required	Contractor
Waste Generation	Quarterly (Contractor)	Construction areas/ workers quarters and storage facilities	Audit of waste generation records (by waste stream and including scheduled wastes) to ensure they have been completed accurately: ● Evidence that waste data and management records have been completed	● Records completed as required	Contractor

Phase / Aspects	Timing and Frequency	Location	Methodology and Parameters to Monitor	Reference Standard/ Compliance Limit	Responsibility
			● Volumes of wastes generated by type, and by treatment (re-used, recycled, landfilled etc) ● Photograph record		
Waste Management	Quarterly (Contractor)	Construction areas/ workers quarters and storage facilities	Audit of any waste management failures: ● Incidents of water pollution or soil contamination ● Health and safety incidents relating to waste management ● Incidents of food waste attracting wildlife ● Photograph record	● Incident reports	Contractor
Waste Disposal	Quarterly (Contractor)	Construction areas/ workers quarters and storage facilities	Audit of final destination/use of waste generated (including scheduled waste): ● Evidence that waste was correctly collected / transported / treated / disposed of by a licensed operator ● Volumes of waste re-used or recycled ● Photograph record	● Required standards of waste collection, transport, treatment and disposal. ● Consignment notes for scheduled waste disposal / recovery	Contractor
Health, Safety and Security	Daily, Weekly, Monthly	Construction site	● OHS and Labour Management Plan by Contractor ● Contractor's OHS Management System in place: audits ● Visual inspection / observation of: ► Provision and use of PPE and vehicles ► Provision of first-aid facilities and fire-fighting facilities at the project site ► Use of warning signs at strategic locations to prevent workers and public contact with potentially dangerous equipment and situation ● Medical examination program including health screening ● Non-compliances, recorded, resolved and outstanding ● Incident frequency ● Lost-time Incident Frequency ● Fatalities (No. and frequency rate) ● Traffic incident frequency ● Photograph record	● HSAP requirement – P8, P13, P16, P18 ● Sarawak Energy Rules and Code of Practice ● PMO-HSE-POL-3000 [Occupational Safety and Health Policy] ● PMO-OSH-PCS-3300 [OSH Management Process] ● Occupational Safety and Health Act 1994	Contractor

Phase / Aspects	Timing and Frequency	Location	Methodology and Parameters to Monitor	Reference Standard/ Compliance Limit	Responsibility
Access Road, Jetty and Traffic	Quarterly	Access roads and jetties	• Visual inspection / observation • Photograph record • Maintenance record • Traffic incidence record • Complaints register	• Traffic rules, safety procedures and regulation as stipulated by the Road Transport Department (RTD) • Sarawak Rivers Ordinance, 1993	Contractor
Site Rehabilitation and Handover	Not later than 6 months after completion of construction	Transmission line ROW, tower sites, access roads, jetties, workers quarters and storage areas	• Visual inspection / observation • Photograph record • Waste management record • ESCP management record • Handover record	• HSAP requirement –P5 • ESIA and ESMP requirements	Contractor

9.9.1 External Compliance Monitoring Schedule

The implementation status of mitigation measures by the Contractor is to be monitored. The Contractor HSSE Team will perform environmental and social monitoring activities during project implementation. The Contractor HSSE will report to SEB. Monitoring reports will be forwarded to SEB Management, NREB and concerned parties as part of regular project reporting.

9.9.1.1 Quarterly Monitoring

An agreed time schedule would be arranged every 3 months. The Contractor's appointed environmental consultant will send their staff to project site to monitor and evaluate the state of mitigation measures implemented by Contractor based on the ESMP and ESIA approval conditions. The main task would be to:

- Review the work progress and to check on mitigation measures and ESMP effectiveness.
- Conduct visual inspection of the Contractor's mitigation activities at construction site based on the items addressed in the ESIA and ESMP.
- Record on the possibility of the adjustment to the ESMP if there is any requirement with the aims to make the ESMP more effective.
- Prepare the quarterly Environmental Monitoring Report (EMR) for SEB's review.
- Submit the EMR to NREB.

9.9.1.2 Annual Monitoring/Audit

The legal requirement for an Independent Environmental Audit is enforced by NREB. This requirement is contained in the **Natural Resources and Environment (Audit) Rules, 2008**. Under section 3 of these Rules, an environmental audit may be carried out in respect of the following:

a. Where prescribed activities as numerated in the First Schedule to the Natural Resources and Environment (Prescribed Activity) Order, 1994 [Swk. L.N. 45/94] are carried out;

b. Where there are reasonable grounds to suspect non-compliance with the approval or permit conditions, directives or orders issued by the Controller;

c. For the purpose of determining the effectiveness of the environmental management systems; and

d. For the purpose of assessing environmental risks caused by development activities or by the exploitation or utilization of the natural resources.

The main objective is to independently inspect, verify and assess the compliance status of the BMTLP against the requirements the ESIA approval, which includes:

- Verification of legislative and regulatory compliance.
- Audit Findings to highlight "Noteworthy Efforts" (conformities) and Areas for Improvement (non-conformities).
- To improve environmental performance through monitoring the effectiveness of the management system.
- To increase the Proponent's knowledge of itself and its activities thus increasing its ability to continually improve and minimize future potential liabilities.

Audits will be conducted by a third-party auditor team registered with and appointed by NREB. The frequency of audits will be determined by the NREB, normally on an annual basis.

9.9.1.3 Completion Monitoring

At the end of project construction phase, a joint monitoring and evaluation team comprises of SEB, the Contractor and the appointed environmental consultant will undertake a final project site evaluation with the main tasks to:

- Summarise all monitoring activities during the project construction phase compared with relevant guidelines.
- Conclude and analysis of all significant environmental and social incidents.
- Prepare a final monitoring and evaluation of the BMTLP.
- Review the effectiveness of the ESMP and recommended improvements to ESMP.

9.9.1.4 Monitoring during Operational Phase

Monitoring during the operation phase is mostly concerned with maintaining the transmission line ROW, ensure maintenance for safety of distribution power lines, meters, capacitors, transformers and other electrical equipment as well as community health and safety. Based on the SEB best practices, experience in maintaining all the transmission lines in the State, operational monitoring will be conducted internally by SEB.

9.9.2 Environmental Reports and Frequency

Table 9.9.3 summarises the type of reports and the frequencies of submission to NREB.

Table 9.9.3: Type of Reports and Submission Frequency to NREB

	Environmental Reports	Frequency of Report Submission to NREB
1.	Environmental Monitoring Report (EMR): • Water Quality (BMPs) – Surface Runoff Discharge • River water quality • Water Quality (Sewage) • Ambient air quality • Noise quality • Etc.	• Quarterly from the commencement of construction activities until completion of construction.
2.	Third Party Independent Environmental Audit	• Annually or as per NREB requirement, during construction phase.
3.	Completion Monitoring	• Once at the end of construction phase.

Table 9.9.4 summarises the internal reports to be submitted by the Contractor to SEB during the construction phase.

Table 9.9.4: Type of Reports and Submission Frequency to SEB

	Reports	Frequency of Report Submission to SEB
1.	Monthly HSSE Report: ESCP	• Monthly
2.	Monthly HSSE Report: Waste Management • Waste Training • Waste Generation • Waste Management Incident • Waste Disposal Audit	• Monthly • Quarterly
3.	Monthly HSSE Report: OSH	• Monthly
4.	Monthly HSSE Report: Labour and Local Content	• Monthly
5.	Monthly HSSE Report: Emergency Report Plan	• Monthly
6.	Traffic Management Safety Report	• Quarterly

	Reports	Frequency of Report Submission to SEB
7.	Monthly HSSE Report: Site Rehabilitation Plan	• Monthly
8.	Monthly HSSE Report: Biodiversity Management: • Habitat / flora assessment • Critical Habitat Analysis	• Once before construction

9.9.3 Written Notification

Based on the requirements of the Environmental Quality Act, 1974, written notification for various components in the project are required to be submitted to the Director General of Department of Environment (DOE). Refer to **Table 9.9.5** for the relevant requirements.

Table 9.9.5: Required Written Notification

Type of Equipment	Written Notification Form
Air – Environmental Quality (Clean Air) Regulations, 2014	
Fuel Burning Equipment	FORM AS/PUB/N-APB – written notification on air emission sources (fuel burning equipment) under Regulation 5
Generator	FORM AS/PUB/N-JANA – written notification on air emission sources (generator) under Regulation 5
Scheduled Wastes – Environmental Quality (Scheduled Waste) Regulations, 2005	
Scheduled Wastes	Second Schedule [Regulation 3] – notification of scheduled waste
	Fifth Schedule [Regulation 11] – inventory of waste
	Sixth Schedule [Regulation 12] – consignment note for scheduled waste

9.10 TRAINING REQUIREMENT

Training is an essential part of implementing this ESMP. It is SEB's policy to continue developing employees' skills and competencies through training opportunities.

9.10.1 Training and Competence

SEB shall provide trained and competent resources to carry out all roles and responsibilities specified in this ESMP. The fundamental requirements of SEB's training are:

- All employees, contractors and visitors shall receive inductions that appropriately address HSSE objectives, hazards, risks, controls and behaviours.
- SEB shall ensure that any employee or contractor working for, or on behalf of the company, is competent on the basis of appropriate knowledge, skills and experience.
- Records of all training and competency assessments shall be documented and maintained.

A training plan has been proposed based on the Project HSSE training needs and requirements for executing work safely during the entire construction and commissioning and operation of the transmission line (refer to **Table 9.10.1**). The record of training shall be documented and maintained. Training will be a continually refreshed as part of on-going site training program and to be provided to all new recruits and continual refresher courses shall be established for staff to attend on a yearly basis.

Contractor will be responsible in ensuring that all contractor personnel are aware of their environmental and social responsibilities.

Table 9.10.1: Proposed Environmental and Safety Training List for the Construction Phase

No	Type of Training	Training Provider	Target Participant	Frequency
1.	HSSE Induction Course by SEB to Contractor	Internal by HSSE Officer	Contractor	Upon mobilisation
2.	HSSE Induction Course by Contractor	Internal by EO (Contractor)	All personnel working at site All visitors of site	Prior to commencement of work Inception training for new recruits. Prior to visit site
3.	Manager Training including ESMP, Chemical Handling Procedures, Environmental Monitoring Plan and Incident Response Processes	Internal by EO	Contractor and Sub-contractor Managers	Prior to commencement of work
4.	Training on environmental risk associated with construction activities	Internal by EO	Contractor and Sub-contractor Managers	Prior to commencement of work As and when required
5.	Waste Management Training	Internal by EO	Person who will be involved in waste handling	Prior to commencement of work
6.	Course On Certified Environmental Professional in Scheduled Waste Management (CePSWaM)	External (EIMAS, DOE)	EO or Person in-charge of scheduled waste management	Prior to commencement of work As and when required
7.	Course on Environmental Regulations and Management in Malaysia	External	Management, HSSE Officer, EO	As and when required
8.	Course on Certified Inspector Sediment and Erosion Control (CISEC) or Certified Erosion, Sediment and Storm Water Inspector (CESSWI)	External (EIMAS, DOE)	EO and Contractor's EO	Once off
9.	Sarawak Energy Safety Passport – Safety Training	Internal by HSSE Officer	All personnel working at site	Once off
10.	Safety Awareness Course for Working Near to Substations / Electrical Installation	Internal by HSSE Officer	All personnel working near Substation / Electrical Installation	Once off

No	Type of Training	Training Provider	Target Participant	Frequency
11.	First Aid Training	External	All personnel working at site	Once off
12.	CIDB Green Card Programme – Safety Training	Construction Industry Development Board	All personnel working at site	Annually
13.	Capacity Building on Stakeholder Engagement	Internal by Community Development/CSR Officer and CLT	Selected affected communities	As and when required

Note: SEB also offers various training courses related to their business. This list is available on SEB's website - https://www.sarawakenergy.com/careers/training.

9.11 ENVIRONMENTAL BUDGETING

To implement this ESMP, budget support is required and will be included into the overall project budget planning. The ESMP schedule and budget estimated are summarized in the **Table 9.12.1** below:

During the construction phase of this project, a proposed budget of **RM1,900,000.00** will be allocated for the environmental budget. This budget will be reviewed from time to time and more funds may be allocated for this purpose should the need arises.

9.12 ESMP PREPARATION – NEXT STEP

This ESMPs is to be made available to the Contractor/s and the Contractor is expected to prepare work plans for environmental management in line with the ESMP and SEB's requirements. During project implementation, the Contractor will be responsible for specific plans e.g., ESCP. In such case, the Contractor is required to develop a specialist and site-specific management plan that address this specific impacts or issues.

SEB is recommended to incorporate the requirements and specifications of the plans in this ESMP into the Baleh - Mapai Transmission Line tender or bid package. An environmental and social (often "HSES" – health, safety, environmental and social) specification shall be integrated into the tender's Technical Specification document. The standards to be met, requirements for management systems, specifics of reporting and supervision, particular design and management measures to be implemented, and criteria for monitoring should all be included the HSES specification.

Documentation is an important step in implementing the ESMP. SEB shall establish a documentation and record keeping system to ensure recording and updating of documents per the requirements specified in the ESMP. The documents should be kept as hardcopies as well as in electronic format. SEB shall assign responsibilities to the Contractor's delegated HSE Department personnel for ensuring that the ESMP documentation system that is established is adhered to and maintained.

Monitoring programs and training requirements are also described within this Chapter, where these relate to specific skills required to deliver the ESMP action in question.

This ESMP as a living document will be updated and improved as the project proceed to enable continuous improvement of the project's social and environmental performance.

Table 9.12.1: ESMP Budget Estimate for BMTLP

No	Items	Construction Phase												Commissioning & Maintenance		Estimated Budget (MYR)
A	**Construction Phase Monitoring**	**Q1**	**Q2**	**Q3**	**Q4**	**Q5**	**Q6**	**Q7**	**Q8**	**Q9**	**Q10**	**Q11**	**Q12**	**Q20**	**Q24**	
1.	Quarterly Monitoring (12 times) - External	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓			360,000.00
2.	Semi Annual Monitoring (6 times) - External		✓		✓		✓		✓		✓		✓			240,000.00
3.	Annual 3rd Party Independent Environmental Audit (3 times)				✓				✓				✓			240,000.00
4.	Completion Monitoring & Community Perception Survey												✓			250,000.00
B	**Operational Phase Monitoring**															**0**
5.	Fauna Survey (2nd year of operation)													✓		200,000.00
6.	Community Perception Survey (3rd year of operation)														✓	260,000.00
C	**Environmental and Safety Training**															0
7.	HSSE Induction Course	✓														30,000.00
8.	Sarawak Energy Safety Passport – Safety Training	✓														30,000.00
9.	CIDB Green Card Programme – Safety Training	✓														30,000.00
10.	Safety Awareness Course for Working Near to Substations/ Electrical Installation	✓														50,000.00
11.	Manager Training	✓														20,000.00
12.	Waste Management Training	✓														30,000.00
13.	Firefighting, emergency preparedness and response, etc.	✓														30,000.00
14.	First Aid Training	✓														30,000.00
15.	Miscellaneous	✓														100,000.00
																1,900,000.00

Appendix 9.6.1

Annex 25: COVID-19 Management Guidelines For Workplaces

ANNEX 25: COVID-19 MANAGEMENT GUIDELINES FOR WORKPLACES

COVID-19 has affected the working population in Malaysia not only due to infections at the workplace affecting manpower, however due to the rise in cases, the nation has had to implement the Movement Control Order. Within the implementation of the Movement Control Order (MCO) which include the Conditional and Recovery Movement Control Orders (CMCO and RMCO), some industries have been allowed to function however with the need to adhere to precautionary measures required at the workplace. It is imperative for industries to take the relevant measures to emphasize and enforce continuous compliance to the new norms to ensure sustainability of operations.

Up till the 20th January 2021, there were 685 workplace COVID-19 clusters reported to the Ministry of Health (MOH) involving 54, 549 cases. The impact of outbreaks has lead to the lack of employees to carry out operations due to them being admitted or quarantined. This guideline aims to provide the necessary preventive and control measures that should be undertaken at the workplace and may be used as a basis for workplace strategies in order to ensure continuity of operations.

Responsibility at the workplace:

The management is responsible to ensure that all preventive measures as deemed necessary under the Prevention and Control of Infectious Diseases Act 1988(Act 342) and its regulations are adhered to. Managing COVID-19 at the workplace may be part of Occupational Health management under the purview of the Safety and Health Committee of the agency.

This guideline consists of two sections;

1. Prevention and control measures to be taken at the workplace
2. Actions to be taken when there is a positive case and/or close contact to a positive case at the workplace

1. PREVENTION AND CONTROL MEASURES TO BE TAKEN AT THE WORKPLACE

It is important for workplaces to implement measures to prevent and manage COVID-19 at their organization. Workplaces have a responsibility towards the safety and health of their employees under the Occupational Safety and Health Act 1994(Act 514) as well as under the Prevention and Control of Infectious Diseases Act 1988(Act 342). Management should take the necessary steps to manage COVID-19 at the workplace by following the steps below.

A. BE UPDATED ON THE PREVENTION AND MANAGEMENT POLICIES RELATED TO COVID-19

Management must constantly update themselves with regards to the latest information regarding COVID-19 and also the current prevention and management policies related to COVID-19. This is important in making decisions with regards to managing COVID-19 at the workplace. Action to be taken under the Act 342 must be implemented with urgency to avoid the spread of COVID-19 at the workplace as well as to prevent from facing liabilities associated with non-compliance to workplace SOP's.

General Information regarding COVID-19

Symptoms:
Common symptoms include fever, cough, sore throat, shortness of breath, running nose. Other symptoms include sudden new onset of loss of taste (ageusia) or smell (anosmia).

Transmission:
Droplets from a person with COVID-19 who coughs or sneezes can transmit the virus to other people who are in close contact (within a distance of 1 meter).

The virus can also spread after infected people sneeze, cough on, or touch surfaces, or objects such as tables, door knob and handrails. Other people may become infected by touching these contaminated surfaces or objects then touching their eyes, noses and mouths without having cleaned their hands first.

Incubation Period
Incubation period is currently estimated to range between 1-14 days

Vulnerable Employees:

- Older persons aged 60 and above

- Those with pre-existing medical conditions e.g. high blood pressure, heart and lung problems, diabetes or cancer

However, anyone may get COVID-19 at any age.

B. TAKE APPROPRIATE STEPS TO ENSURE MAXIMUM PROTECTION OF STAFF TO ENABLE CONTINUATION OF BUSINESS.

I. Action by Employers

a) Communicate regularly to employees about COVID-19;
   i. Advice employees on preventive methods:
      - physical distancing (keep 1 metre away from others)
      - practicing personal hygiene and respiratory etiquette. (Refer Appendix 1)
      - practicing hand hygiene (Refer Appendix 2)
      - using a mask in areas required and where distancing cannot be maintained (Refer Appendix 3)
   ii. Remind employees regularly about preventive methods e.g. via e mail, social media, gamification etc.
   iii. Provide regular updates on COVID-19 to employees
   iv. Provide appropriate health education and promotion materials regarding COVID-19 to all employees

b) Instruct supervisors to monitor
   i. for symptoms among employees at workplace
   ii. employee compliance to preventive measures
c) Encourage employees to take temperature regularly and monitor for respiratory symptoms
d) Register premise with MySejahtera and generate and print QR code to be displayed at the premise for registration of employees and visitors upon entry (refer Annex 42).
e) Consider obtaining travel declaration from employees on travel history.
f) When an employee develops symptoms;

i. if at home:
   - Wear a surgical mask and seek medical attention at the nearest health facility immediately.
   - Avoid contact with family members
   - Accompanying person should also wear a surgical mask.

ii. if at workplace:
   - Supervisor to relieve staff member from work
   - Wear a surgical mask and seek medical attention at the nearest health facility immediately
   - Avoid contact with fellow employees
   - Any accompanying person should also wear a surgical mask

g) Conduct mental health assessments among employees and carry out appropriate measures to reduce stress among employees.

h) Monitor sick leave and absenteeism among employees. Keep a record of staff sick leave including reasons for leave, duration of leave and current status.

II. Action by Employees

a. Keep updated on COVID-19
b. Scan MySejahtera QR code upon entering work premise
c. Always maintain good personal hygiene;
   i. Frequent hand washing with soap and water or hand sanitizer
   ii. Practice respiratory etiquette
d. To practice physical distancing at work, during breaks and meals
e. Limit food handling and sharing of food in the workplace

f. If they develop symptoms;
   i. To alert supervisor immediately
   ii. Wear a surgical mask
   iii. Seek medical treatment immediately
   iv. Avoid contact with fellow employees
g. Employees are also advised to practice all preventive measures out of work

III. Action at the Workplace

a. Screening of all employees entering the workplace
    i Temperature: those with temperature >37.5°C should be asked to seek assessment at a medical facility
    ii Symptom screening: those with cough, sore throat or difficulty breathing should be asked to seek assessment at a medical facility
    iii History of returning from overseas (taken when necessary)
    iv History of close contact to a positive or suspected COVID-19 case (taken when necessary)
b. Enforce hand sanitization at entrance for visitors
c. Ensure regular cleaning and disinfection of the workplace including equipment and focusing on high touch areas (Refer Appendix 4)
d. Practice a no handshaking policy
e. Provide easy access to frequent hand washing for employees. If not possible, provide hand sanitizers for frequent hand cleaning
f. Proper maintenance of toilet facilities with adequate supply of liquid soap and disposable towels.
g. Provision of lidded rubbish bins with regular refuse disposal
h. Consider alternate communication methods e.g. virtual meetings in place of face to face meetings, group chats etc.
i. Consider deferring large meetings or events
j. Consider having meetings outside in open air if possible
k. In case of indoor meetings or events, ensure all precautions are taken:
    i. Informing participants not to attend if they are unwell and to join the meeting using a virtual platform
    ii. Ensuring all relevant information is given to the participants such as the practice of hand hygiene and the use of surgical masks for those who develop respiratory symptoms
    iii. Providing:
        - Hand sanitizers where necessary or ensuring availability of soap and water
        - Surgical masks and tissues for those who develop respiratory symptoms
    iv. Consider opening windows for natural lighting and better ventilation

v. Ensuring limited participants and distancing is maintained at all times
vi. Monitor participants daily and provide support for isolating those with symptoms and transporting them to a health facility.
vii. Keep in touch with participant on their health status after seeing the doctor.
viii. Keep contact details of all participants and organizers in case there is a need to contact them. Records should be kept for at least one month for the date of completion of the event.

i) When situation calls for working from home
   i. Ensure employees are well versed with handling virtual sessions
   ii. Employees are given work targets accordingly

j) In the setting of **public transport** e.g. taxis, ride-hail services, trains and buses, drivers should ensure the following measures;

   i. Frequent hand washing using soap and water, or hand sanitizer and practice respiratory etiquette at all times.
   ii. Wear a mask while carrying out the duty
   iii. Seek medical attention if symptoms develop
   iv. Ensure passengers wear masks while in the vehicle.
   v. Regularly disinfect the interior of the vehicle after alighting passengers or after each trip including door handles (both outside and inside).

IV. Travel Considerations for the workplace

a. Before traveling:
   i. Follow the latest advisory on traveling from MKN and MOH
   ii. Assess the benefits, risks and needs of travel
   iii. If travelling overseas, obtain all relevant information of travel to that particular country
   iv. Ensure high risk employees do not travel
   v. Consider issuing employees who are about to travel with face masks and hand sanitizers if possible

b. While traveling:
   i. Always bring along surgical masks and hand sanitizer for use when required
   ii. Avoid crowded places and closed contact with people especially those showing symptoms
   iii. Avoid eating raw foods
   iv. Seek prompt medical treatment if developing symptoms

c. On returning back:
   i. Observe home surveillance or quarantine procedures as per MOH directives
   ii. Immediately seek medical attention if you have symptoms of respiratory tract infections such as fever, cough or difficulty breathing within 14 days after returning from the visit

2. ACTIONS TO BE TAKEN WHEN THERE ARE POSITIVE CASES AND/OR CLOSE CONTACTS TO A POSITIVE CASE AT THE WORKPLACE

If a person is determined to be COVID-19 positive by the medical facility or screening process, the results will be informed to the relevant District Health Office (DHO/PKD). An officer from the DHO will investigate the person to determine household, family and workplace contacts. The DHO will carry out investigations at the workplace to determine the actual workplace close contacts who need home surveillance. Those identified will be issued with a Home Surveillance Order and be given a wrist band to wear for a period of 10 days after which they will be given a release order by the DHO. The DHO will also advise the workplace on the cleaning and disinfection procedures that may be followed. The organization should wait for the officer from the DHO to come to the workplace.

(A) Positive case among the employee/employer

I. General

a) If there is any positive case detected by testing, the case should be notified by a treating doctor to nearest District Health Office (DHO).

b) DHO will carry out investigation to identify close contacts, do a risk assessment and advice on disinfection procedure at the workplace.

II. Actions by Management

a) While waiting for DHO, a positive employee should isolate him/herself at home. Employee should be isolated in a separate room, wear a face mask and avoid contact with other members of the residence. The employee should use MySejahtera to inform MOH and to carry out the daily home assessment tool.

b) Management should try to identify the close contacts of the positive case by taking a detailed history of persons in close contact to him/ her. This is in order to assist when DHO comes to investigate.

c) Close contacts identified by management may be put on home isolation while waiting for DHO to come. They should be isolated in a separate room, wear a face mask, maintain 1-meter physical distancing and frequently practice hand hygiene as well as maintain good personal hygiene.

   In a dormitory set up, one dormitory can be used to house close contacts if there are a large number of them. These individuals should not have any contact with any other employee in the building.

   Close contacts should use MySejahtera to inform MOH and to carry out the daily home assessment tool.

d) The management should give full cooperation to the DHO in their investigations at the workplace. Identified close contacts would be given a home surveillance order (HSO). Symptomatic close contacts will be screened and tested.

e) Positive cases with no or mild symptoms as well as negative cases may be given home surveillance depending on the risk assessment by DHO as well the suitability of their home for quarantine.

f) Any employee who develops symptoms or whose symptoms become worse while on HSO, should immediately report to DHO for further action.

g) Those who are not considered as close contacts may return to work with strict adherence to SOP.

h) Disinfection should be carrying out as advised by DHO. However, while waiting for the DHO, management may carry out disinfection as per Annex 36; Garis Panduan Pembersihan dan Disinfeksi di Tempat Awam.

i) The workplace only has to be closed for the duration of disinfection and subsequently the workplace may function as normal but with available employees who are not close contacts. Employers may inform the DHO to reopen the premise once the disinfection process is completed.

j) In the event, majority of the employees are close contacts, the workplace may be closed for the duration determined by DHO in order to carry out investigation and risk assessment.

k) The workplace will be closed for a period of 7 days if there is found to be a breach of SOP's

l) Close contacts who have completed Home Surveillance for 10 days should get their release order from DHO before returning to work.

m) Positive cases who have been discharged from hospital, PKRC or home isolation may return to work with strict adherence to SOP.

n) There should be strict adherence to SOP's on transportation of suspected, probable or confirmed cases among employees.

III. Special Circumstances

a) For industries with a large number of employees who are close contacts, they may be allowed to work strictly using a bubble concept, the details of which will be determined by the relevant DHO.

This guideline may be used as a basis for managing employees during this period of time. Employers and employees are advised to keep up to date with the latest developments and advice issued by the Ministry of health.

PERSONAL HYGIENE

- Good personal hygiene should be observed at all times. Regular hand hygiene by washing with soap and water or use hand sanitizer
- Maintain at least 1 meter (3 feet) distance between yourself and anyone who is coughing or sneezing.
- Avoid touching eyes, nose and mouth

RESPIRATORY ETIQUETTE

- Cover mouth and nose with bend of elbow or tissue if coughing or sneezing.
- Throw tissue in the trash after using it
- Wash hands with soap and water or use hand sanitizer
- If no tissue available, use upper sleeve or elbow instead of hands while sneezing and coughing.

GUIDELINES FOR HAND HYGIENE

- Wash hands with soap and water or alcohol-based hand sanitizer after any contact with respiratory secretions
- Remove jewelry before any hand wash procedure
- Rinse hands under warm running water
- Lather with soap; cover all surfaces of the hands and fingers using friction.
- Rinse under warm running water
- Dry hands thoroughly with a disposable towel
- Turn off faucet without recontaminating hands
- Keep fingernails short and do not use fingernail polish or artificial nails.
- Alcohol-based hand sanitizer may be used to decontaminate hands that are not visibly soiled
    - Apply alcohol-based hand sanitizer to palm of one hand and rub hands together, covering all surfaces of hands and finger, until hands are dry.

GUIDELINES ON WEARING SURGICAL MASKS (3 PLY)

1. If you have running nose or flu like symptoms, you are advised to stay at home. If you need to go out, make sure you wear a surgical mask.

2. Avoid crowded places. Wear a surgical mask if you cannot avoid them

3. Wash hands before wearing a surgical mask and after taking one off.

4. When wearing surgical mask, the following should be noted:

    4.1. The facemask should fit snugly over the face
    4.2. The coloured side of the mask should face outside
    4.3. Tie all the strings that keep the mask in place
    4.4. The mask should fully cover the nose, mouth as well as the chin.
    4.5. The metallic wire part of the mask should be fixed securely over the bridge of the nose to prevent leakage
    4.6. The surgical mask should not be used more than a day but if it is wet, damaged or soiled by secretions or body fluid at any time, change the mask immediately.
    4.7. Discard all used surgical masks into a plastic bag which should then be tied properly before disposing it into a rubbish bin.

DISINFECTION PROCEDURES

Surfaces

- If surfaces are dirty, they should be cleaned using a detergent or soap and water prior to disinfection.
- For disinfection, diluted household bleach solutions, alcohol solutions with at least 70% alcohol should be effective.
    - Diluted household bleach solutions can be used if appropriate for the surface. Follow manufacturer's instructions for application and proper ventilation. Check to ensure the product is not past its expiration date. Never mix household bleach with ammonia or any other cleanser. Unexpired household bleach will be effective against coronaviruses when properly diluted.

- Prepare a bleach solution by mixing:
    - 5 tablespoons (1/3rd cup) bleach per gallon of water* or
    - 4 teaspoons bleach per quart of water **
    - For soft (porous) surfaces such as carpeted floor, rugs, and drapes, remove visible contamination if present and clean with appropriate cleaners indicated for use on these surfaces. After cleaning:
    - If the items can be laundered, launder items in accordance with the manufacturer's instructions using the warmest appropriate water setting for the items and then dry items completely.

* 1 Gallon = 3.8 Liters

** 1 Quart = 0.95 Liters

Refer Annex 36 Tatacara Pembersihan Dan Disinfeksi Di Tempat Awam (Garis Panduan Pengurusan COVID-19 di Malaysia No.5/2020) at www.moh.gov.my

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